

Characters | Robots | Environments | Vehicles | Creatures

Sci-Fi Art Essentials

228
PAGES OF
ESSENTIAL
ART TIPS

Improve your
**Digital
Art Skills**

with expert workshops
from the world's best
professional artists

Future

Featured Artists

The list of the world's best digital artists who have contributed workshops and tutorials

Aly Fell

Francis Tsai

Loïc Zimmermann

Marc Brunet

Daryl Mandryk

Marek Okon

John Kearney

Michael Kutsche

Andy Park

Mike Corriero

Bill Corbett

Alex Broeckel

Ryan Church

Gary Tonge

Leong Wan Kok

Ioan Dumitrescu

Dr Chee Ming Wong

Mike McCain

Christian Alzmann

Jesse van Dijk

Saejin Oh

Keith Thompson

Christian Bravery

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Sci-Fi Art Essentials

Sci-Fi Art Essentials

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“My favourite type of painting – one that faithfully depicts the aircraft’s design, but also illustrates the illusion of speed”

Ryan Church (page 126)

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Get your
resources

Turn to page 226
to get hold of all
the resources
from this issue!

Introduction

Helping you capture your visions of the future

Science fiction art, sci-fi or SF, whatever your preferred terminology, is as old as man's imagination and has always been about one value – to present visions of the future, to capture the ideas of what might become science fact. As a popular art form it continues to grow and adapt, taking on new influences, references and techniques to portray the burgeoning imaginations of new generations.

For many, science fiction art began with the illustrations of stories from HG Wells and Jules Verne, but it wasn't until the pulp books and magazines of the early 20th century that science fiction and sci-fi art became a popular genre. In April 1926 the pulp

magazine *Amazing Stories* hit the shelves of American bookstores, published under the direction of Hugo Gernsback and carrying the imaginative illustrations of artists like Virgil Finlay, Frank R Paul, Leo Morey and many others. The magazine became inspirational to many artists.

The success of *Amazing Stories* spawned even more pulp books and magazines, including Gernsback's follow-up magazine *Wonder Stories* (launched after he left *Amazing Stories*), and the even more popular *Astounding Stories* of Super-Science in 1930. Backed by a larger budget *Astounding Stories* was able to pay more for work, and so became the home of some of pulp science fiction's best

writers, including Nat Schachner, Stanley G Weinbaum and Harl Vincent and artists, like Alexander Leydenfrost and Frank Kelly Freas.

What followed was an explosion of science fiction stories, illustrations and movies that caught the imagination. Many more pulp magazines launched, including *Planet Stories*, *Fantastic Adventures* and *Startling Stories*. But it wasn't until the second generation of science fiction writers, including Robert A Heinlein, Isaac Asimov and AE van Vogt (who all wrote for *Astounding Stories* at some time) that things really took off. These new writers needed new artists to sell their ideas, and in the hands of illustrators like Keith Roberts and Jim Cawthorn painting covers for the newly launched *New Worlds* magazine in the 1960s, science fiction art had found new, experimental talent.

The tradition continued with new generations of artists and the emerging paperback market, as traditional painters like Chris Foss, Bruce Pennington, and Roger Dean interpreted, conceived and shocked their way across imagined galaxies. Their styles contrasted with the earlier Golden Age artists as they strove to paint visions of futuristic machinery that looked lived in, used and workmanlike. Foss in particular painted spacecraft that looked like ramshackle messes of pylons and upgraded machinery careering through space on some undisclosed mission.

Of the modern traditional era, Jim Burns is seen as the most widely respected UK artist. He has an uncanny ability to draw out the texture and imagery of a writer's work with ease, creating detailed glimpses of imaged futures. Other contemporaries of note are John Berkey, Vincent di Fate and Syd Mead, the latter widely regarded as the premier futuristic vehicle artist, who was launched to fame with his concepts for *Blade Runner*.

Now digital artists have taken up the mantle, creating universes of

COVER STAR

Jim Burns, the legendary artist responsible for book covers for Isaac Asimov, Robert Silverberg and Ray Bradbury tells us about his life and work.



SPINNER GIRL

In this stunning workshop, Francis Tsai shows us how he painted this future cop scene, inspired by Syd Mead's work on *Blade Runner*.



ROBOT ADVICE

Christian Alzmann shares his top 25 tips on how to design, paint and create most excellent robots.

robots, war machines and bizarre creatures for new science fiction mediums, as pulp novels and comics give way to movies and video games. The lines between writers and artists as creators of a vision is blurring too. Digital artists are now looked on as visual futurists, tasked with developing the ways and means for imagined people to live and work. The lines between science fact and science fiction are merging.

Whatever the medium, the message and themes remain the same. Space ships, women of the cosmos and machines of the future are as vital to science fiction art now as they were in the 1970s and the Golden Age. In this publication, many of these same themes are tackled by today's best digital artists, including workshops on painting creatures, characters, vehicles, environments and robots. John Kearney demonstrates how to create an alien creature, Christian Alzmann reveals his 25 tips for designing robots and Kevin Cunningham explains how he creates a futuristic vehicle.

The core techniques and skills of painting remain the same for all

great sci-fi art. Whether painting traditionally or digitally, the fundamentals stay consistent. To create good science fiction it needs to tap into science fact, and the rules of the real world need to apply to futuristic visions. The rules of proportion, perspective, light and anatomy, when applied to otherworldly designs, make them more real, grounded and believable. Learning to control the core skills of painting, whether digitally or traditionally, can enhance your science fiction art.

The workshops collected here aim to offer a solid grounding in the art skills needed to bring your imagination to life. They demonstrate how to master composition, perspective and lighting, and will teach the basics of symmetrical design, concept techniques and character creation.

So you have the tools, the inspiration and the imagination to pick up your digital brushes and begin painting your own visions and designs of what may or may not exist. And who knows, another generation could be encouraged to paint the possibilities (or impossibilities) of their dreams.



Adobe Photoshop CC
Publisher: Adobe
Price: From £9/month
Web: www.adobe.com

The software of choice for most digital artists, Photoshop can feel dense and inaccessible at first but persist and its options are limitless. The Layer system revolutionised digital painting and the ability to create both custom and textured brushes makes it the software of choice for concept artists.



Corel Painter 2015
Publisher: Corel
Price: £283
Web: www.corel.com

The real plus of Painter is its ability to recreate the feel and texture of real oils and acrylic paints in real time as you put colour down. The brushes react like real tools and the custom paper textures enable you to experiment with undertones.



ArtRage 4
Publisher: Ambient Design
Price: £26
Web: www.artrage.com

Don't be put off by the low price point or the simplistic workspace design, beneath the surface ArtRage 4 is a credible and fun package that recreates the processes of painting with oils, watercolours, pastels and more. While it feels simple the results are excellent, and for many the software is fast catching the more expensive Painter.

Gallery

Some of the best new digital sci-fi art and artists making waves around the world, picked and presented to inspire you. With the help of online forums and websites you can be part of the digital revolution too – simply visit www.imaginefx.com and upload your own gallery

Monsit Jangariyawong

LOCATION Thailand

WEB www.monsitj.cgsociety.org

EMAIL monsitj@hotmail.com

SOFTWARE Photoshop, Wings 3D



Monsit graduated with a BA in architecture, but since then he's been working as a digital artist. His first loves are fantasy and sci-fi art. "They've always been my favourite themes," says Monsit. "It's fun to create things from your imagination, whether it's a monster or a space ship." His beautifully realised images draw on myth, film and Japanese manga.

1 DARK ASSASSIN Created with Photoshop, it features a special agent in a galactic cold war scenario. "He has the ability to sneak into the enemy base and complete the objective," he explains. "But this new mission is not as easy as he thought – now it's time to test his close-combat fighting."

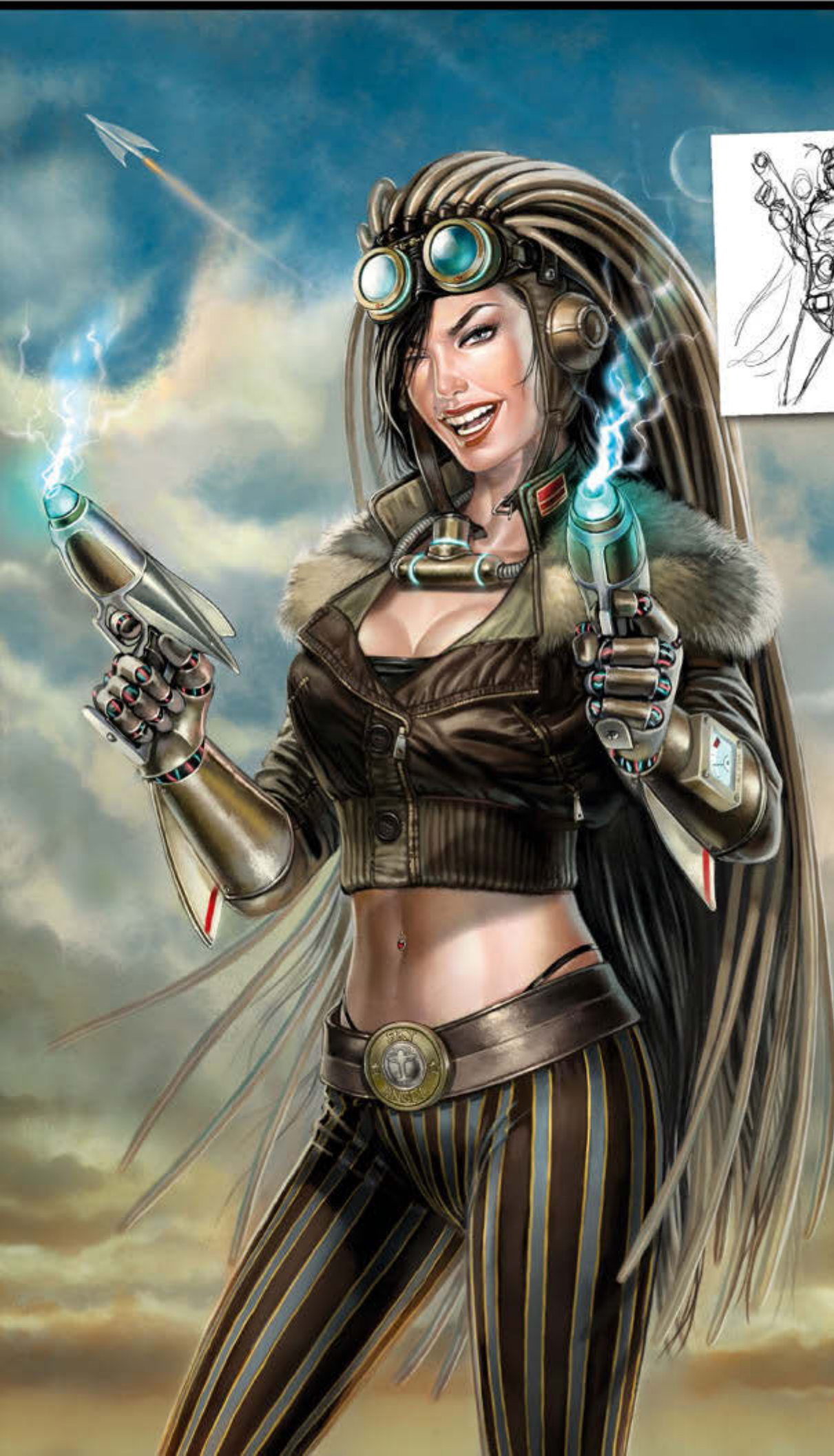
2 MANTIS QUEEN This character is a complicated figure. Unlike your regular mantis, she isn't content to just eat her mate. "He must live as long as she wants," says Monsit. "The undead man is doomed to spend his life as her servant, lover or prey depending on her emotion."

1



2





From digital sketch to finished and coloured artwork, Aly Fell painted our cover artwork, entitled Sky Angel, in Photoshop over a period of a week.



Cover artist + **ALY FELL**

COUNTRY: England

FAVOURITE ARTISTS:

Norman Rockwell, Joe Chiodo, Tim Biskup, Linda Bergkvist, Jonny Duddle, Jason Chan and loads more!

SOFTWARE USED:

Photoshop, SketchBook Pro

WEB: www.darkrising.co.uk

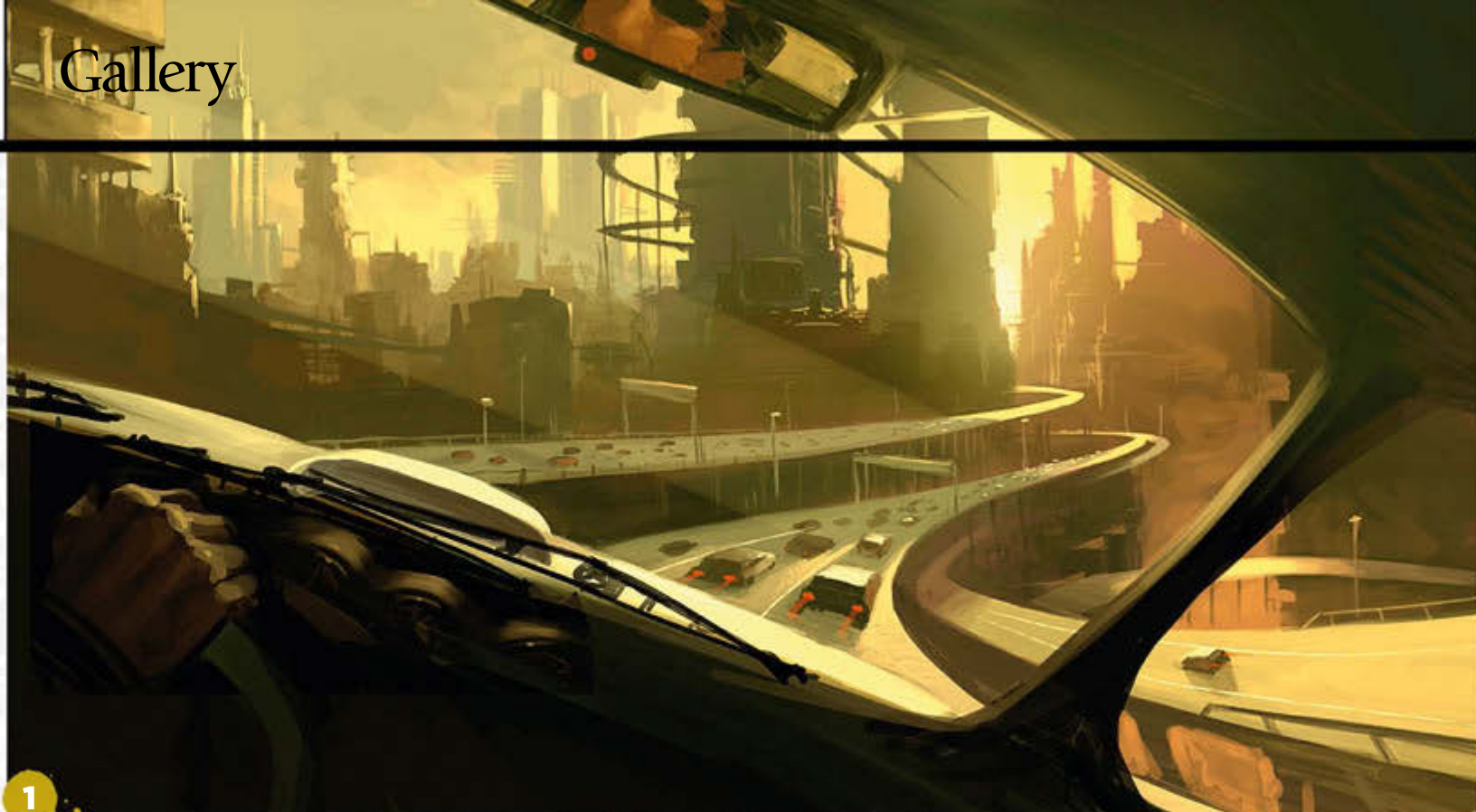
Aly is a concept artist who's worked at Eurocom, Core Design and Cosgrove Hall, in the UK. His amazing cover artwork, entitled Sky Angel, was



originally created for ImagineFX magazine over a period of a week and a half, entirely in Photoshop.

"In the past, I've usually scanned in pencil sketches and worked them up in Photoshop, but here I did a number of rough drawings directly in the software," explains Aly. "I selected one and started adding colour and detail."

He states his inspirations as being "all over the shop." They range from "retro flying stuff to The Great Waldo Pepper." Aly was previously a 2D animator at Cosgrove Hall, where he worked on classic series like Count Duckula and Dangermouse.



1

+ Christian Bravery

LOCATION: England

WEB: www.leadinglightdesign.com

EMAIL:

christian@leadinglightdesign.com

SOFTWARE: Photoshop



After the strip he was illustrating for the 2000 AD Magazine got canned in favour of reprints of Preacher, Christian came to a logical but painful conclusion: "Drawing comics was no way to make a living!"

He decided to try his hand at video games. "I applied to various companies and last on the list was a new start-up called Lionhead Studios." Lionhead was looking for 'the best 3D artist in the world.' Undaunted by never having used a 3D package, Christian applied. "I spent 48 hours solid learning 3ds Max on a friend's machine and somehow got the job," he says.

For the next nine years he worked on a number of titles and was art director on Black & White 2. Since leaving Lionhead and setting up Leading Light Conceptual Design he's stayed busy. "I've created concept art and design solutions with EA Criterion, Sony and Ubisoft, to name but a few."

1 CITY "This is a key-moment illustration for a game," Christian says. "The player enters this near-future city at dawn."

2 ESCAPE A production illustration designed to show off "the dark and oppressive mood, near-future setting and action-based gameplay elements of the title."



2



1

Josh Grafton

LOCATION England

WEB www.strangelet.deviantart.com

EMAIL strangelet@dsl.pipex.com

SOFTWARE Cinema 4D, Photoshop, Bryce 5, HullGen, KPT, Bodypaint



Otherwise known as Strangelet, Josh has been a composer and producer working in film and advertising for a long time.

"But I've always been an artist since I learned to make the screen border change colour on my ZX Spectrum," he says. An undying love of sci-fi films like *Starship Troopers*, *Dune*, *Star Wars* and *Aliens*, and the timeless art of people like Chris Foss and David A Hardy have roused Josh.

Nowadays the inspiration comes from game development teams. It's long been a dream for Josh to art direct games. "To this end I joined the dev team at Angels Fall First and we're well under way with a space-war sim, *Planetstorm*," he says.

1 THE HEAVY 23RD "The colours in this scene are straight from Chris Foss and the old-time Terran Trade Authority books," says Josh.

2 DRAGON'S NEST "The Antarean Imperial Navy's new battle cruiser, *Morningstar*, before her shakedown tour at Lasford Base planetary shipyard" explains the artist.



2



Below and left: Skan Srisuwan's *The Pepper Tundra* and *The Conductor*, two works which show the artist's sublime ability to paint dynamic, yet extremely focused compositions.



Skan Srisuwan

LOCATION: Thailand

WEB: www.real-fiduciose.deviantart.com

EMAIL: m_d_temps@hotmail.com

SOFTWARE: Photoshop, Illustrator, FreeHand



Thai-born Skan first came to our attention when he won a spate of online challenges with his stunning image *The Conductor*, seen above

He has since moved to Singapore, where he is a freelance concept, character and vehicle designer, as well as doing art instruction work at a number of local universities.

1 THE PEPPER TUNDRA Painted entirely in Photoshop, this image ended up on the back cover of the same issue of *ImagineFX* that *The Conductor* fronted.

2 THE CONDUCTOR Originally submitted for GCSociety's Master and Servant challenge, it eventually became a cover for *ImagineFX*. It took Skan two weeks of non-stop hard work to complete, and was displayed on the cover of *IFX* using the rather stunning MetalFX ink technology.

1



James Paick

LOCATION US

WEB <http://ifxm.ag/j-paick>

EMAIL jpaick@yahoo.com

SOFTWARE Photoshop



James picked up a pencil at an early age and copied anything that he thought was intriguing. "My art became a voice for me to communicate, to just let loose and have fun," he remembers. In terms of subject matter, he just did whatever art came naturally. Now he works full-time as an illustrator and art director in entertainment advertising, working on many game titles and films. But James is not one to let the grass grow under his feet. "I also juggle many freelance projects, ranging from video game concept designs to graphic novels."

2



1 DOWNTOWN MANHATTAN This digital matte shows off James' futurescape capabilities perfectly.

2 CATHEDRAL A concept illustration in the space opera style.

3 WATERFALL FORT A work that depicts a kind of future idyll we might enjoy.

3



Wei Ming

LOCATION China

WEB www.allenwei-design.com

EMAIL i3version@yahoo.com

SOFTWARE 3ds Max, Photoshop



Ming was 10 years old when he first dreamt of becoming an artist. "Just draw what you like to draw," my mother told me.

Thereupon I used my pen to create something new and build my world. My mum encouraged my passion."

When at high school, Ming received very formal and systematic training in modern industrial design. "I studied 3D animation by myself with solid painting skills, both of which intrigued me, though my understanding of design was still vague."

Studying abroad changed this, helping Ming see the real charm of this field. "Seeing so many high standard concept designers amazed me!"

1 CONCEPT DESIGN "This is a concept design with intense perspective. I start off with a line drawing on paper, then bring it into Photoshop for colour rendering," the artist explains.

1





2 + Joe Vinton

LOCATION England
WEB www.joevinton.blogspot.co.uk
EMAIL info@futurerealm.net
SOFTWARE Bryce 5, Photoshop



Joe (aka Orbital) got into using Bryce about five years ago. "From the start it became a pretty obsessive hobby." A window cleaner

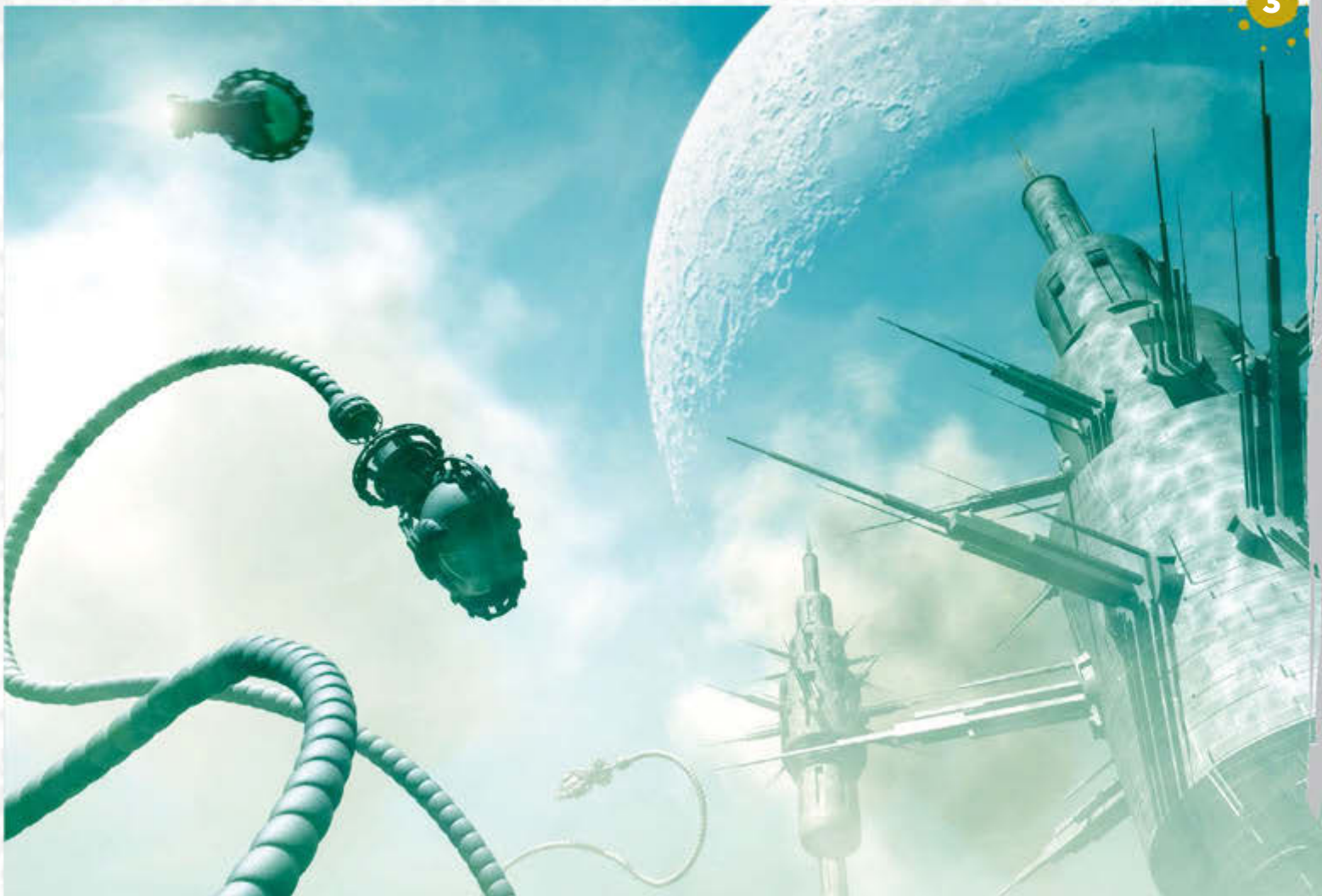
by day, he says: "It isn't the most exciting job in the world, so it's nice to be able to focus on doing something creative in my spare time."

Joe modestly still considers himself a hobbyist, despite the quality of his work and having worked for AutoFX and DAZ. Mostly, he creates fantasy worlds. "I find this enjoyable as I can push my imagination as far as possible. I like to create scenes with atmosphere and perhaps a little bit of magic."

1 PLACES YOU'VE NEVER BEEN This is part of a series. "It's about a traveller who visits many strange and wonderful places."

2 A BREAK IN THE CLOUDS "I've always been fascinated by the sky," says Joe. "So I wanted to create an image where the sky captures the imagination."

3 AUTOMATED Modelled and rendered in Bryce 5, with slight colour adjustments in Photoshop, this image shows "a vision of an alien race dominated by technology."





"The creative process is the same for anything. Always start with a sketch. It's almost like a magic trick. Whatever you do, it always works!" (David Levy, page 32)



Interviews

Be inspired by some of the world's greatest sci-fi artists, from the timeless art of traditional painters from the seventies to modern-era artists creating their visions digitally. The best way to learn is to enjoy the works of others.

Featured artists



Daryl Mandryk



Daryl was seemingly born with art, comics, and video games running through his blood, and his

career has spanned some of the hottest video games going. His work captures a naturalistic feel that sets it apart from other digital sci-fi art, as well as being able to convey strong themes of heroism and struggle.

www.mandrykart.com



Thierry Doizon



Thierry grew up in Madagascar where he studied art and literature, before landing a job at video

game developer Ubisoft and further creating art for games the calibre of Quake Wars. Thierry's skill in creating snapshots of a technological future has gained him a cult following, as have his tutorials for Gnomon.

www.barontieri.com



Patrick Jänicke



The concept artist behind some of the biggest Hollywood sci-fi and fantasy

movies, including Blade, Fantastic Four and Stargate, Patrick was mentored by the legendary Syd Mead when he arrived in America and never looked back. He's now one of the film industry's most in-demand artists.

<http://ifxm.ag/pjanicke>



David Levy



David's ambition was to create something that doesn't exist, something unique and

original. That ambition has seen him become one of the world's best concept artists, specialising in sci-fi imagery and iconic spacecraft design that do for digital art what Chris Foss did for traditional.

www.vyle-art.com



Jim Burns



Born in 1948, this illustrator has a flare for realising the imagined future worlds of sci-fi literature in paint and pixel. Jim's work for authors including Isaac Asimov, Robert Silverberg and Peter Hamilton mean his universes are carried in the minds of generations of fans, world-wide and forever.

www.jimburns.co.uk



MACHINE FLESH

Daryl's entry into CGTalk's MachineFlesh Challenge. "In a crowded field of contestants," he says, "I knew I needed to create something simple, eye catching, and powerful."

Artist PROFILE

Daryl Mandryk



AGE: 40

COUNTRY: Canada
Daryl has a self-confessed lifelong obsession with video games and digital art. He's worked at Disney and EA, and is now a full-time freelance artist.

SOFTWARE USED: Painter, Photoshop, Maya

WEB: www.mandrykart.com

THE ARTIST

"When I'm not working, I play video games, watch movies, play basketball and generally enjoy the city of Vancouver," explains Daryl.



Daryl Mandryk

"There's a 10-year-old boy in me who is designing the coolest toys he can think of. And the best toys scare you a bit." Read on as this artist feels the fear

Even when he's messing around, Daryl doesn't mess around. "I have the same ambitions as every artist," he explains. "To gain respect from my peers, and recognition from the public. Beyond that, I'm really only interested in pushing my art as far as I can, and being as prolific as I can."

True to his word, when he's not producing concept art for next-generation video games, he's busy adding to an already impressive gallery of fantastic imagery. "I think the only real way to develop any kind of style is to paint a lot," he says. "And the only way to evolve that style is to paint even more." So that's what he's doing.

BORN ARTY

Like so many artists, Daryl was born with paint in his blood, so to speak. As a youngster he recalls that he was always into art, comics and video games, but something was holding him back.

"It just seemed like such a long-shot to actually make a living from any of that," he explains. So Daryl decided to pursue a more practical degree in business. But the b-word wasn't floating his creative boat and after a couple of years studying, this conclusion could no longer be avoided.

But, avoid it he did. "I decided to finish my degree anyway," he says. Then a little shame-faced, he admits "I'm a very stubborn person." So after graduating from business school Daryl found himself working in a commercial real estate firm trying to save enough money to go back to school. "It was a busy time," he remembers.

Working all day, then going home to work on art at nights, Daryl was teaching himself 3D animation, "and felt like it was something I was really passionate about," he enthuses. The return to school was hastened with a student loan, "I applied to art school and that's how it all started."

GAME ON

"I hung out at arcades all the time when I was a kid." And this, Daryl proudly announces, "really was the golden age of arcades." Maybe it was the bright lights or the 8-bit sounds but Daryl was hooked. "They were extremely addictive, and as a kid, you just get sucked right in."

Then one day the arcade made it to the living room. "My first home-console was a ColecoVision. I remember playing an arcade-perfect Donkey Kong and it was one of the coolest things ever." And so it was, but time marches on in the world of video



GOOD LISTENER

"This is really just a sketch that got out of control," says Daryl – although it does have a theme: "It's based on the idea that listening to music can alter your state of mind."

games, indeed, faster than anywhere else. "When I got a PC, a whole new world of gaming opened up, and that was it for me – I was hooked all over again."

But games are different when you work on them. Daryl still loves gaming, he has to, it's how he makes a living. "But working in the industry definitely makes you more critical," he says, "and I find it annoying

Daryl was fresh out of school and working for a pittance, but it didn't matter, "I was getting paid to learn Maya and meet people in the industry – that was all that mattered." Back then, everything was NURBS. "The entire studio was pretty new to Maya, so the idea of polygonal modelling wasn't even approached, which, looking back on it, seems pretty ridiculous."

“Video games are an art form – a good game should grab your attention, suck you in and give you one hell of a ride”

when I begin nitpicking a game instead of just enjoying it."

It's also true to say that great games, those magic games that just speak to you, are harder and harder to find. And obviously commerce has a hand in this. Commerce is risk-averse, and the result, according to Daryl, is "a lot of watered-down boring games – especially on console."

ART FORMS

Although the field is littered with second-rate games, there are still gems to be found. "Video games," the artist asserts, "are an art form." And like any good piece of art, "a game should grab your attention, suck you in, and give you one hell of a ride." Even once it's all over, "it should become ingrained in your memory."

All this may seem obvious to anyone who regularly plays games. "but not many publishers realise this." Daryl reiterates – "The problem is that companies are afraid to take risks because of the production costs involved these days, so you get many games that are decent but ultimately forgettable. I think that's a shame."

Doubly so because to work in games requires passion, "It's a rollercoaster ride because the industry moves so fast and is so volatile," Daryl explains. He also wants to put pay to the misconception that people in the gaming industry have dream jobs. "It's a demanding environment, you really have to work hard at it, and you have to want it."

After having said that, Daryl goes on to perpetuate that same myth by outlining his current duties on the next instalment in the Turok franchise. "My role is lead concept artist, so I spend a lot of time drawing weapons, characters, props, vehicles, environments and so forth." Hmmm.

TURNING PRO

Even Daryl's first job – the one that usually makes people wince when they think about it – sounds like fun. "I was a 3D modeller for a small startup company. We were working on a television pilot for a 3D animated show, based on a series of fairytales by the Brothers Grimm."

This may have been a contributing factor in the studio's downfall, but he has fond memories. "I'll always remember that job for the people I met and worked with – they were by far some of the most fascinating characters around."

MR FANTASTIC

"I was definitely a bit of a geek growing up," says Daryl. And if loving Star Wars, The Hobbit and The Lord of the Rings and all those types of things bestows on you the label of 'geek', then he could be right. What makes a difference is if you breathe life into those things, as Daryl has. "I've been drawing fantastic things as far back as I can remember."

"That's just where my imagination was," he adds, there really is no reason behind his fascination with the fantastic, he simply states, "that's what I drew." All there is to it. Drawing the fantastic sets you free. It also makes the alternatives less

LOVE IS MANDATORY

1984 is one of Daryl's favourite novels, "so I wanted to try something with that sort of theme: You'd better be in love... or else."



THE HORRIBLE THING

This piece was an exercise in Daryl's patented "putting down shapes and just carving away at them" technique. After a while, he started to see a few creepy shapes, "and just ran with it."

DARYL MANDRYK'S

Artist tip

SCALE YOUR IMAGE

"A good tip," says Daryl, "is to paint at a low resolution first, then scale your image up as you go." This forces you to think broadly in the early stages "and makes it hard for you to get caught up in unnecessary detailing."

VICTORY

"When I was small I watched *The Terminator* and have been scared of machines taking over ever since." Daryl painted this one "as a reminder that evil robots should have their heads cut off."

Daryl Mandryk's ART IN FOCUS

Letting an image unfold from the mind

"Victory started the way many of my paintings do - just abstract shapes on a page," says Daryl. The attraction of this approach is the happy accident. "I'm all about making a ton of mistakes and then figuring out which ones to keep."

There were few certainties outside of a strong pose and a dark palette. "I usually start in black and white or sepias, essentially creating an under painting of loose values," he explains. "Working into the bigger shapes I chisel away a few areas until I get the rough forms laid out," he says.

Next came the lighting, followed by a few washes of colour to liven it up a bit "and from there it's really about rendering until it makes you happy." While some people prefer tightly rendered images, Daryl likes to keep things looser, "and capture some of that initial energy."

"The fire in the background was added to give the character's silhouette more punch and add drama," says Daryl, who lets the image emerge of its own accord. "As with many of my paintings," he says, "the end result came as a surprise to me."

DARYL MANDRYK'S

Artist tip

MANY VERSIONS

"Save often, and save multiple versions. If you decide to take a painting in another direction, put aside a saved version for future use. You never know when you might want to revisit it. Keep your ideas around!"

WAR ANGEL

One of Daryl's earlier paintings with a fresh coat of paint. "I have a habit of putting small blue lights on things," he observes. "They really have no significance other than to provide a little visual interest in certain areas and create a bit of a high-tech feeling."

Daryl Mandryk's VITAL STATISTICS

"Dead things freak me out..."

Place of birth

Edmonton, Canada.

Date of birth

1975.

Current location

Vancouver, Canada.

Favourite music

Too many to list... I'm currently listening to a lot of Ennio Morricone, Arcade Fire, and Jay-Z.

Favourite traditional artist

Frank Frazetta.

Favourite digital artist

Craig Mullins.

First memory

Bits and pieces of Star Wars. I was two years old and I must have slept through most of it, but I clearly remember seeing the part where Luke swings over the chasm with Leia. Everything else is a blur.

Pet hate or any actual phobias

Dead things freak me out... for example, seeing a dead bird on



the ground will send shivers down my spine. I also have an irrational fear of public speaking, which is probably why I do what I do.

Most prized possession

My health.

Most annoying personal trait

A workaholic personality.

Average time spent on an image

Usually around three or four hours, but it can vary a lot depending on the complexity of the image and how much I feel I need to finish it.

Single most important piece of professional advice

Always try to work with people that are better than you. In this way you assure yourself of constant growth.

Left or right-handed

Right-handed.

COMMANDER

The message here is very simple: "Never, ever, mess with someone with glowing armour and wires coming out of their heads."



“I’m quite capable of painting cute bunny rabbits. I guess in broad terms I just want to paint things that kick ass”

Workshop PAINT LIKE DARYL MANDRYK

You can follow Daryl’s informative step-by-step walkthrough as he talks you through his journey to create the apocalyptic image below.

TURN
TO PAGE
70



interesting, that’s why, according to Daryl “the real world was boring.”

And if you detect a certain amount of darkness in much of Daryl’s work, don’t be too alarmed. “I’m quite capable of painting cute bunny rabbits.” It’s just that bunnies don’t usually get to carry firearms or battle bad robots, “I guess in really broad terms I just want to paint things that kick ass.” That’s the spirit!

THEMES

Daryl’s personal work takes this approach and runs with it. But, with those vividly imagined fantasies he somehow manages to convey a feeling of naturalism, coaxing your attention past the unfamiliarity of the scene, encouraging a direct association with what’s going on.

It helps to keep the themes simple says Daryl: “Good versus evil... man versus machine, that kind of thing.” All perennially applicable themes. Daryl also acknowledges the influence of his professional love affair with video games: “so my themes reflect hero and villain, and epic struggles.”

This is only natural, but the characters in Daryl’s paintings are somehow immediately engaging, suggesting that at least one of the many projects he has tucked away in his

head might turn out well. “I’d love to try doing a graphic novel one day,” he asserts.

PROCESS

Daryl’s working practice casts some light on the naturalism of his vision. A new piece usually begins digitally, “but it’s a very random process.” Particularly during the early stages where, “to anyone watching, it looks like I’m just blobbing paint around.” In fact, there’s a search being conducted “for interesting shapes and forms.”

This is the creative muscle flexing, “It’s a bit of an abstract process,” Daryl agrees, “just trying to find that rhythm and harmony to build up from. I work like a sculptor – blocking things in and chiselling away until they look like something.”

The mental process is backed by a will, too. “While I work I think about what I’m trying to convey.” Whether it’s a mood or a specific story, Daryl is finding ways to seduce the eye, “I’m always looking for ways to help sell it to the viewer.” This is not a rigid process. “I try to relax while I paint as much as possible, and let the brushstrokes flow. There’s always music in the background and a good glass of wine doesn’t hurt either.” You have to let the magic happen, don’t force it.

BONE PRIEST

The Diablo series of games is one of Daryl’s all-time favourites. “The most important element I wanted to nail on this was the face. I wanted the viewer to look at the face and hear in their head the noise that might come out of this thing,” he says.



SCORCHER

“Give me any excuse to paint an apocalyptic fellow with a gun,” says Daryl, “and I’ll take it.”

BEACH 2

This was painted during Thierry's time at Steambot Studios, which he co-founded.

Thierry Doizon

"Maybe I was just born in the wrong century." The artist known as BARoNTiERi explains why he's partial to robots...





EXPLORERS

The terrain and the mood of this piece harks back to Thierry's early exposure to Ridley Scott's *Alien*.

Madagascar. This huge island, situated off the east coast of Africa, is known by ecologists as the eighth continent thanks to its abundant, rare and diverse wildlife. Now almost denuded of its forest covering by slash and burn farming, this dramatic part of the world is where Thierry grew up.

As exotic, precious and threatened as this island may be, the creative mind always wants more than it sees. That's how Thierry (aka BARONTIERi) got started as a concept artist. "I always tried to design arrow guns for fishing and alien spacesuits," Thierry says. "And plenty more funny, stupid things."

Today he works as a concept artist for Square-Enix in Montreal. But back in 2005, Thierry brought together a collective of artists calling themselves Steambot Studios. They produced two art books and undertook a slew of freelance work while Thierry was at the tiller. It would seem that stupid things are always in demand.

LOGICAL PROGRESS

After studying art and literature in Africa, he "did the logical thing" and returned to France where he moved into industrial and aesthetic design. After three years in the south of France, he moved to Rochester in England where, in 1995, he received a BA in 3D design. Game development beckoned.

But even as an artist with obvious talent, he reckons the game industry is a tough

market. It's still a young and evolving business, not the kind of world where you can afford to be overly precious as having games cancelled is a normal occurrence. "I worked on many games which never passed the green light," laments Thierry.

This wasn't always the case, as concept artist on games like *Vexx*, *I-Ninja* and the classic shooter *Quake Wars*, Thierry has developed an ability for producing snapshots of a technologically superior future. One where mankind has come out the other side of our currently looming crisis, not necessarily better, but certainly different.

GOING DIGITAL

His training largely pre-dates the dominance of digital techniques. "I started with my pencils, paintings and especially Pantone markers," he recalls. They were tough times for a concept artist. "Ten years ago I had a crazy library. I spent all my spare time in bookshops to find cheap references." The arrival of the web has meant a revolution in his working practice. "It's magical!"

The digital era just makes things easier and faster. Thierry marvels at the change wrought by the intervention of the silicon chip. "When you think about the time it took on paper to make the same stuff that we do now with a PC it's just insane." And it's only going to get more crazy.

"Nowadays there are a lot of forums for concept artists showing and sharing images, tutorials and techniques." This



WIRED 1.5

This image, developed from a sketchbook fragment, shows Thierry's love of cyberpunk.

Artist PROFILE

Thierry Doizon aka BARONTIERi



AGE: 36

LOCATION: I

consider myself a world citizen, but I currently live in Montreal...

until I can move to Mars...

FAVOURITE DIGITAL

ARTISTS: Hmm... Whassup, Sparth, HPX... too many really!

FAVOURITE TRADITIONAL

ARTIST: Jeffrey Jones, Kent Williams, Brandywine School, Rodin, Leonardo...

SOFTWARE USED:

Photoshop, but sometimes I like to use Painter, as it has a different feeling to it. I also use 3D software for some basic modelling, because it helps in building complex environments

WEB: www.barontieri.com





abundance of readily available sources of information, training and review for artists means there's a wave of incredible talent building up. "It's something I would have loved to experience a decade ago," he muses.

THANKS, RIDLEY

"Blade Runner and Alien had a huge impact on me as a kid," adds the artist. "And since then I've been obsessed by sci-fi." You can certainly see the influence of both of those movies in images like Explorers and Thai Flight – but there's more going on here than a homage to Ridley Scott. Thierry confirms – "I also love fantasy, cyberpunk and steampunk as much as futuristic worlds. They're all part of the mix. They offer the best terrain for my imagination to explore."

You get the feeling that Thierry may have been asked to justify his sci-fi passion more than once. He goes on: "I like science, technology, stories and movies. If you combine all this, you can guess my favourite genre." Despite this fascination with futuristic technology, he is an artist first, putting no constraints on his creativity.

"I don't fill my sketchbooks with any particular subjects, just the inspiration of the moment!" For the moment that inspiration is scientific but, not all that convincingly, he insists that could all change. "At the moment I'm doing a lot of sci-fi-based images," he

admits, "but it's not a compulsion. It depends on my feelings. I don't think that I'm consistent in the process of doing them."

THE KEYS

Inspiration alone is not enough, talent is only the raw material. "I practice a lot," he nods, "even though I consider myself lazy." After all, art is a discipline, you can't just pick it up when you feel like it. "It's a typical subject of discussion among all artists," agrees Thierry. "But it all comes down to this – talent is nothing without work!"

"Experimentation and experience are the keys," says Thierry, and these two things determine his creative choices. "I can use one of my sketches, a thumbnail, a stain, a speedpainting, a tile, anything really – it's just a matter of having fun."

The composition, the subjects and the style – even the medium – should be chosen by instinct. "For the moment I spend most of my time on digital, but I will soon work on some more traditional things." Thierry won't be tied to a single style or technique. "I just don't have a particular method," he shrugs. "I try to use the most efficient process depending on the situation." This approach has served him well in the journey through the world of game development, and continues to draw attention to his latest artistic adventures.

OCTO-LADY

The evolution of a tentacle-touting heroine

Thierry really likes his Octo-lady concept, but he just can't find a use for her right now. "She'd be a perfect comic book character."

But having those tentacles – and that look – she demands attention. "Her skirt has some living tentacles, and there is an obvious fetishist imagery behind it all," he agrees. "So give me more time and I will do something with her."

Octo-lady was conceived in 2003. "I was posting a lot on a speedpainting thread at ConceptArt.org," Thierry says. "The subject was about magicians and at first she was a man with a long hood, but the tentacles appeared quite early."

After a few posts, Octo started to emerge. Although the concept isn't finalised yet, Thierry has a good vision of the whole character and story, but all he reveals is that she's based on the blue-ringed octopus – the terrible tease.



THAI FLIGHT

"My work is colourful and experimental," says Thierry.



“ I practice a lot, even though I consider myself lazy. It all comes down to this – talent is nothing without work ”

Gallery

Interviews

Workshops

Core skills

ENVI 13

"An exosuit flying over a very industrial sci-fi landscape at dawn." A chance to show off Thierry's manipulation of scale and composition.

Patrick Jänicke

The concept artist behind *Blade* and *Stargate* talks about taking real life and making it just that bit more fantastic...

Producing 'fantastic contraptions' for Hollywood blockbusters like *Stargate*, *Blade* and *Fantastic Four* can be tough, says Patrick Jänicke. When you're working, it's flat out. "There's a lot of pressure because there's never any time for you to sit around. As an illustrator you work 10 hours a day, every day." But Patrick's hours are spent designing freeze guns, space rockets and high tech laboratories, that cause slack-jawed amazement in all who witness them. It could be a lot worse.

The problem is a familiar one. "You always wonder – is my work any good? The answer is, 'yes, it's totally amazing' but that doesn't stop the nagging fear. You're only as good as your last laser canon or Pharonic space station." Welcome to the world of the Hollywood concept artist.

Patrick originally trained as a product designer in his native Berlin, but his styling was too radical. "I designed this crazy boombox once – this big cylinder that looked almost like a bazooka. It was what people here would call bling-bling – all black and gold," he smiles. But Berlin in the late 80s was into Bauhaus minimalist chic, so boomboxes were frowned upon. "They said, 'You should go to Disneyland or something.' The funny thing is, a few years later Philips came out with a boombox just like mine!"

He recalls, "I was so bored. I wanted to quit and go study film making and become a director." Being just 18, Patrick was too young, so he toughed it out. "But I liked it better once I was deeper into it, once I learned to draw better and make models." In hindsight, those skills led to Hollywood. "I understand now. But at the time I was rebellious. I wanted to design things that were more eye-catching."

HYPER-REALISM

Now the artist behind Arnie's freeze gun in *Batman & Robin* is unafraid of conforming to type. "If it comes to designing a weapon or a car I like the hard edged, almost brutal approach. I like things that are strong, angular and masculine." Striking, but designed to be hyper real. This was his attitude with *Blade* – a real guy, a limited budget, with maximum vampire body counts and the

best on-screen wow effect. "I designed this crossbow to shoot silver stakes that go through a vampire's heart," he enthuses. "I like that aesthetic. You try to come from the real-life industrial design approach, then tweak it and make it just that bit more fantastic." Amen.

DRAWING ON EXPERIENCE

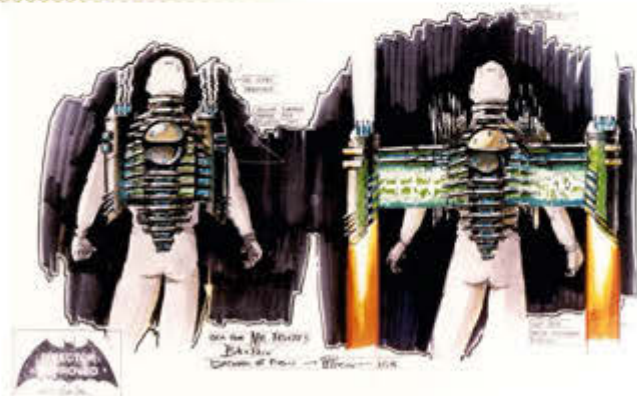
Patrick first headed to the US intent on being a product designer. The turning point was his mentoring by the legendary Syd Mead, the visionary designer behind *Blade Runner* and *Aliens*. The transition to movie concept artist wasn't easy, he admits. "I had to seek people out and ask how they got there. I had to knock on doors." He totally restarted his portfolio and came up with concepts for castles, drawings of monsters and spaceships.

Patrick got his first break with Syd on *Stargate*. He singles out one practical element as a breakthrough point. "You do a line drawing, then Xerox it so the lines become black and high contrast. Then scan the Xerox into Photoshop and put it on a Multiply mode layer above everything else." Patrick reckons this is a common and versatile technique. "It works like a clear acetate. You can paint under it and it will be like a spine for the drawing." He prefers working with textures from the real world, shrugging "I only have a tiny A5 tablet anyway."

DARK FUTURES

Patrick's work centres on darkly menacing future-tech. It's the kind of superhero and super-villain machinery that comes with a serious health warning. "But that's not really me," he claims, "it's somehow something that just happened. I always enjoyed sci-fi movies. I never read the books though." What is he most proud of? "The freeze gun I designed for Mister Freeze in *Batman & Robin*. And the *Blade Bike*, because I love motorcycles." He's a comic buff too – of the European variety... "like Tintin. They actually tell stories."

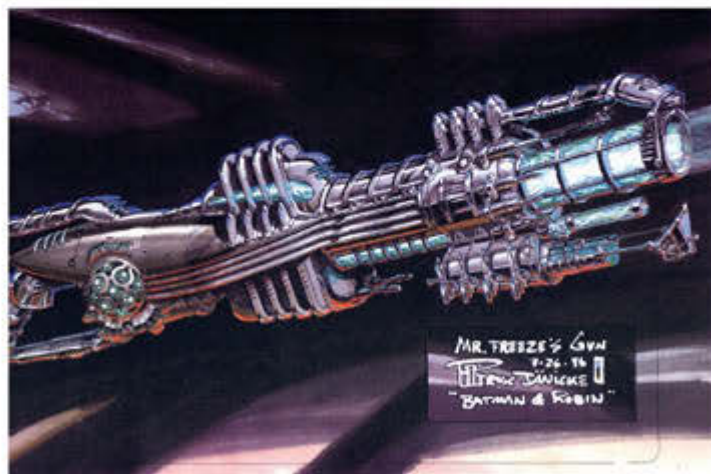
His sci-fi movie capers involve desires to make things the world isn't ready for. And as he likes making golden boomboxes and killer motorbikes, he gets asked to do them repeatedly. But he sighs, "I can't have my mom watch the movies I work on!"



MR FREEZE
One of Patrick's ideas for Mr Freeze's rocket pack from *Batman and Robin*.

Patrick's illustrations have a beautifully hand-made quality. This is where he gets his professional kicks. "I really love to do line drawings where inks run into each other and look messy. I prefer when you can see that the paper has a tooth to it and the pencil is a little rough." He believes digital is dangerous. "Illustrators, if they use Photoshop too much they lose their style. It's getting harder for me to recognise the work of my peers." While he accepts it offers huge advantages, it brings risks and horrible standardisations in style. The trick is to take just what you need, not to become reliant. "The artwork on sci-fi and fantasy movies is often spectacular. Many times on a job I see more beautiful work on the walls there than in any gallery."

What makes an artist like Patrick so important is that his vision is his own. He's suited to sci-fi, but not because he's copied the textbook method for designing space aliens. It's because he hasn't. ●





FANTASTIC FOUR IMAGES

Patrick's original vision for the film involved a 60s retro, Jack Kirby feel: "Anyone who's seen the movie will know this didn't quite pan out," he explains. Visit his website at www.productionillustration.com for a look at his concept designs for the original 2000 production, and more art from the 2004 release.



Artist PROFILE

Patrick Jänicke



AGE: 43

COUNTRY: US

FAVOURITE

ARTISTS: Christian

Lorenz Scheurer, Syd Mead,

Rene Magritte, Stephan

Martinière, Tom Johnson

FAVOURITE FILM/SCENE:

Blade Runner, for design

SOFTWARE USED: Photoshop

WEB: <http://ifxm.ag/pjanicke>





Artist PROFILE

David Levy



AGE: 37

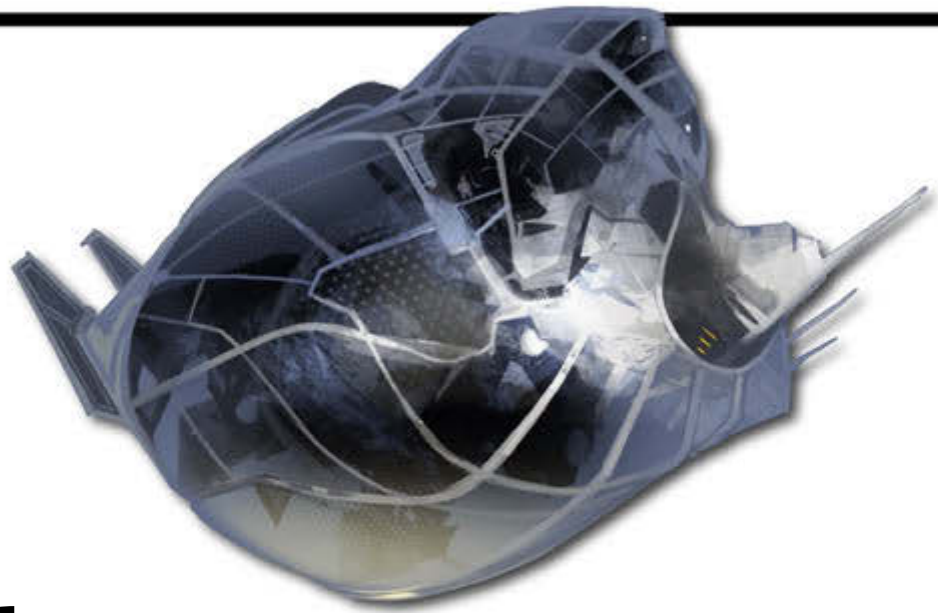
COUNTRY: Canada
David began as a
concept artist for

video game companies. He set
up Steambot Studios with his
friend Thierry Doizon, and is
now is now a senior concept
artist in the movie and video
game industry.

WEB: www.vyle-art.com

BALVYLE

*A complicated scene is given
dynamism and made easy
to read thanks to David's
loose, painterly style.*



David Levy

"I wanted to create something that didn't exist yet, something different and original." This childhood urge would lead to a life in concept art...

David has happy memories of growing up in the south of France. "It's very sunny all year long, warm, with a very nice coast," he smiles. "I spent most of my weekends on the beach, or sailing with my dad." The strange thing is that when you know this about David and you look at his artwork, it makes perfect sense. You can feel the sunlight and fresh air. There's a strong feeling of goodness coming through.

"My grandfather used to draw a lot, and I saw him as a hero," David recalls. "He built roads in the desert, ski-jumped and was a flower geneticist, while staying very humble. He was a real inspiration for me, and drawing was part of it." The first creature David drew was the monster from the movie *Legends*.

Now working as a senior concept artist in the movie and video game industry in Los Angeles, California, David feels he's finally in a position to do what he's always dreamed of – "creating a whole universe and all the creatures living within it." It sounds like a grand scheme, but he continues to retain his humility. "It's the most challenging project I've ever worked on," he says, "but it's also the most rewarding."

INSPIRE ME

Japanese animation was an important early influence, and one you can still see echoes of in David's work. But by the age of 11, a nautical theme had also begun to make

itself felt. "At that time I wanted to become a naval architect," he explains, "so I started drawing and creating blueprints of hundreds of sailing boats."

That sounds like hard work for a pre-teen, but David was smitten. "Then later it became more about windsurfing and cars. I drew hundreds of those, too. I think what was always more attractive to me was to create something that didn't exist yet, something different and original." Between blueprints of original creations and weekends at the beach, a pattern was

beginning to emerge. "I found a real pleasure in inventing," he recalls.

These weren't half-baked plans either. "I always had a ton of very serious projects, such as a revolutionary sailboat," says David. "And I'd create everything, from the company's logo to the whole set of sails." Most youngsters would have given up soon after they'd had the idea – but not this one.

"Anything that was related to flying or space was on my list as well," David adds. His bedroom walls were covered with fluorescent stars, and his bookshelves

HALLOWEEN A

"I think a lot of it has to do with not stopping curves or lines," says David of the elegance that is exhibited in his images.



➤ were filled with titles involving space exploration: "That became a great subject to inspire my drawing."

LIVING OFF PASSION

Although David had an excellent role model, the idea of making a living through art didn't seem a genuine possibility. "Until very late I didn't realise it could be anything more than having fun creating impossible stuff," he remembers. Inspired by comic books and movies, David just did what came naturally, putting pen to paper and making those ideas seem more real.

Then one day came a breakthrough. "I discovered that behind beautiful objects, hard-working artists were living off their passion," he explains. At the time I was a lazy kid, only interested in playing video games or spending my days on the beach, windsurfing..." Young David needed more convincing, and this time Mum came to the rescue, virtually forcing her son to enter an art school test.

STRUCTURED THOUGHTS

That audition did the trick. "It opened my eyes and I realised that I wasn't the only one with a passion," he recalls. "From then on, I decided to put all my energy into art." However, following his inventive tendencies, the direction he chose was a practical one – industrial design. Studying it was, says David, "a real

eye opener." Before then he hadn't really grasped that work needn't be a burden, "Going every day to work and being passionate sounded like heaven to me – and you could even earn money!" he enthuses. As a discipline, design opened up a world of possibilities for him. "Also, it gave me what probably was and still is the most important thing – a structured thought process."

The thing about industrial design is that you can't just jump into creating something without a structure. You have to have a plan. "What's called the creative process is the same for anything you create," David explains. "Always start with a sketch," he advises. "It's almost like a magic trick. Whatever you do, however complex it is, it always works!"

Naturally, sketches vary in complexity. "The sketches you'll need to create a toothbrush are probably less complex than the ones you'll need to build an aircraft carrier," he notes, "but the process stays the same." David is scathing of the idea that there's a magical shortcut to talent. "There are no fast tricks to make your art better," he insists. "The solution is elsewhere – it's all about time and process." Accepting those conditions is the key to progress.

GAME ON

David wasn't destined to be a product designer. One day, while studying



architecture in Holland, he happened to catch a TV show about a Parisian game studio. "Oddly enough, I was talking to one of my best friends on the phone a few days later," he remembers. "It turned out he was working for the same company!" Fantasy art fans will probably recognise the name: "It was BARonTiERi."

Right away it was clear to David that games were going to become increasingly important. "I realised then, there was a ➤

“ The creative process is the same for anything. Always start with a sketch. It's almost like a magic trick. Whatever you do, it always works! ”

MOUNTSHIP A

David's sense of scale and solidity have benefited from his study of architecture and industrial design.



DAVID LEVY'S

Artist tip

BEWARE OF LAZY SHORTCUTS

"Do not use shortcuts that turn you into a lazy artist: Using too much photography, the same perspective angle and other easy ways have a tendency to slow down your brain. Constant practise and exercise makes for more flexible concept artists. But I still think using references is necessary to keep your creativity filled with different shapes, colours and lightings."

VIAGER A

David's work combines an understanding of human form and the structures we may one day build.



INSECTIVIBE A

Insectoid machines are a firm Levy favourite.



© Ubisoft Entertainment

David Levy's PROJECT FOCUS

One fearsome Persian warrior, and make it snappy!

The list of artists who'd already worked on Prince of Persia was impressive: Sparth, Hydropix, Pat Lambert... "Arriving on such a big project, there's this mixed feeling of satisfaction and fear," says David. Towards the end of production the art director came to him with an urgent - "like usual!" - request. "They needed a Persian but also fantastic type character." A massive looking soldier, but something that would fit with Lambert's fabulous character designs for the series.

"Combining a good design for production, an expressive pose and enough details for the texture artists is a very tricky job," David notes. It's too

easy to get engulfed in your painting and forget your ultimate purpose - to serve production. "I remember redoing the original sketch for the character quite a few times, to get the proportion right - it needed to be massive but not clumsy looking."

To exaggerate the dynamic nature of the image, David also wanted to push the perspective by "using the blade weapon as a main point of interest to drive the viewer into the picture." Finding a motif for the robe that would be coloured but not cheesy looking was another challenge. Fortunately, David was more than equal to it.

Gallery

Interviews

Workshops

Core skills

PILOT AI

A warm-up shows David's ability to express complex emotions concisely.



DAVID LEVY'S

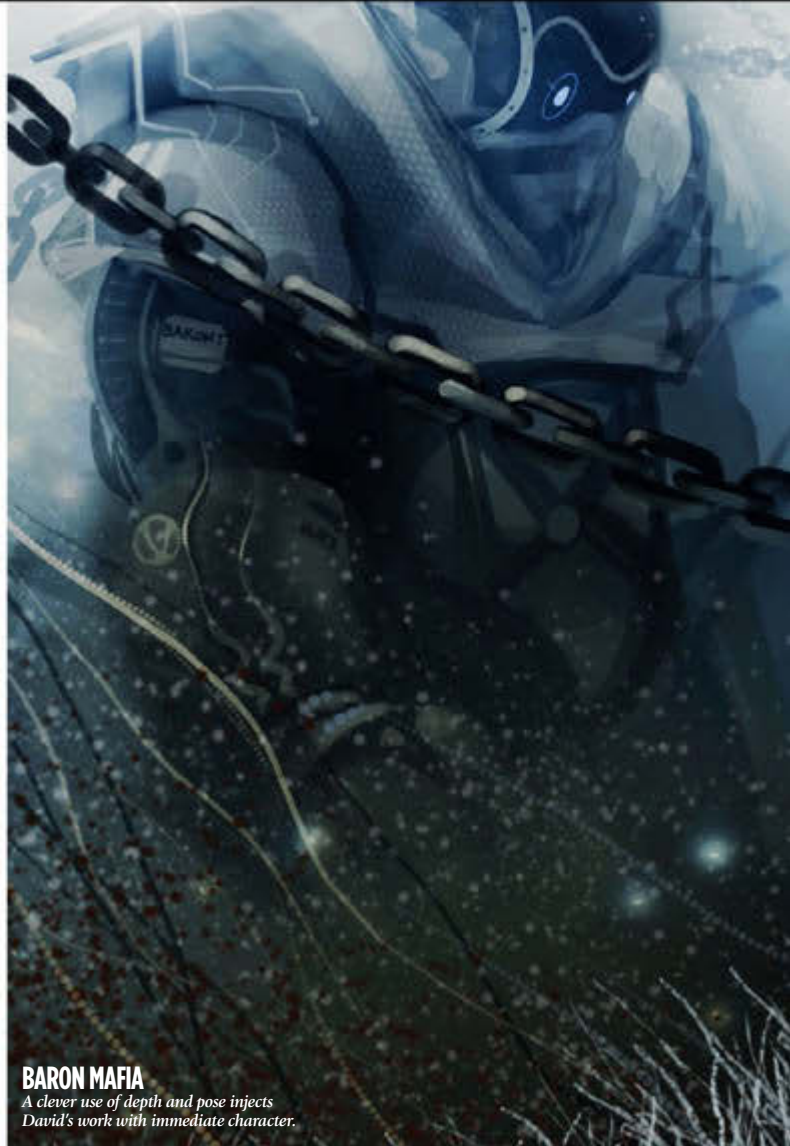
Artist tip

TECHNICAL SHORT CUTS

"I find that using technical shortcuts is very handy. I constantly assign monkey-work tasks to shortcut keys. For example: image flipping, rotations, layer creation... It makes for faster and less cluttered work. Doing that means you spend much more time on what is really important, which is creating great images."

BARON MAFIA

A clever use of depth and pose injects David's work with immediate character.



LIGHTER AIR A

Scale is a brilliant tool for injecting a sense of drama into a painting.



“My sister took great pleasure in forcing me to watch horror movies like *Alien*, which totally traumatised me, and gave me nightmares for months”

➔ good chance that this medium would become the main entertainment of the future.” Going into games offered a way to tell stories and create worlds. “The fact that I’d been a console addict for many years influenced my choice too,” he adds.

Already passionate about movies, David believed that a similar process of creation could be applied to games, creating a natural place for the concept artist. “Looking at it now,” he says, “I was right – but I think it took 11 years for the industry to understand it.” Those early jobs weren’t ideal, but you get out what you put in. “Working in a bad spot will teach you the most important thing – we are extremely lucky working as concept artists.”

BEUTIFUL CURVES

The films and books that David loved had a clear theme running through them. “Obviously *Star Wars* was a big influence, but it went further than that. As a kid I really wanted to become an astronaut, or a test pilot (I still do!), so any book I could read on the subject I jumped on.”

Thanks to the writings of Isaac Asimov, Theodore Sturgeon and Ray Bradbury, and movies like *2001* and *Blade Runner*, “I was

hooked,” he says. And when David wasn’t getting goggle-eyed at the vastness of space, his older sister was subjecting him to another type of classic. “She always took great pleasure in forcing me to watch horror movies like *Alien*, which totally traumatised me, and gave me nightmares for months,” he grins.

As he explored his need to invent, these earlier influences have been supplemented with a more general love of creative space and structure. “As with other artists, like Sparth,” he says, “I’m extremely inspired by modern architects, Frank O’Gehry being one of them, but also Lebbeus Wood and Santiago Calatrava. They’ve mastered the modelling of environments and spaces through beautiful curves.” Studying these masters of human space gives David tools with which to generate believable alternatives. “Using curves helps a lot in the reading of an image,” he explains. “It helps the eye flow, and a less aggressive image tends to please people more.”

LEAVING IT LOOSE

He continues to apply these architectural lessons to elegantly far-fetched visions of deranged creatures, gravity-defying



SPEEDPAINTING DEMON

David keeps his freelance options open despite his busy day job.

spacecraft and mythical places. “I think a lot of it has to do with not stopping curves or lines,” he says of his style. “I try not to be too tight with my paintings, and even though I stay loose, the high resolution helps achieve a detailed look.”

It’s interesting to note that David keeps his approach free-flowing, but doesn’t insist on an analogue approach. “There was a time I would scan drawings, but then I’d spend more time cleaning the pencil stuff than actually polishing the painting,” he explains. On top of this, when time is production-critical, staying entirely digital speeds up the process tremendously.

“When you see Dan Milligan drawing on a computer, you have no doubts about staying digital all the way.”

In the end, he feels, it’s down to personal choice. All you have to do is be comfortable. “For example, I don’t like painting on smaller Wacoms,” he says, “because I think the movement should come from your arm and not your wrist.”

Understanding your own needs is half the key. The rest is practise. “When I go back to painting after a period with less work, I find it extremely painful to get back in the same rhythm,” David reveals. “It feels like starting a train – difficult at first and then momentum helps.”

Once it’s moving, though, you just want to climb on board...

David Levy's VITAL STATISTICS

Age
37.

Current location
Los Angeles, US.

Favourite music
From Mozart to Bad Religion, and Lounge-Radio.com.

Favourite traditional artist
Klimt, Moebius.

Favourite digital artist
Sparth/Mullins.

First memory
Smashing my front teeth falling from a roundabout.

Average time per image
Anywhere between 20 minutes and 20 hours.

Superpower you'd most like to have?
The ability to fly.



Does anything keep you awake at night?

Painting without noticing time passing by. Like being in a meditative state.

Is the truth out there?

It most definitely is, but I haven’t found it yet (although I am searching very hard).

Single most important piece of professional advice
Paint more.

Left or right-handed
Right-handed.

If you were an animal, what would you be?
Anything flying or swimming in a gracious manner (do I sound like a new-age guru yet?).

workshop DRAMATIC CONCEPT ART

In this five-page workshop, David Levy explains how to paint a piece that’s full of drama, by using custom brushes to create this image of nuclear winter.

TURN TO PAGE 184



Jim Burns

Bringing science fiction's big hits to life with shape and colour, here is a master creator of worlds...

Illustrating science fiction literature demands an artist with a clear and convincing vision of the future. Jim Burns is that man for leading authors like Isaac Asimov, Robert Silverberg and Peter F Hamilton. A science fiction world-builder par excellence – and the only non-American to win a Hugo Award for Art (Best Science Fiction Artist) Jim sees through the eyes of the authors he works for to create what he calls “narrative snapshots realistically depicting things that do not exist.”

PILOT OF THE FUTURE

Jim started early. “Even at the age of three or four I loved drawing cars and aeroplanes.” Once ignited, his fascination with all things technological grew like wild fire. “At some point it subtly transformed itself into the love of science fiction.” Like any fire, fuel was needed, and it came in the form of Dan Dare, Pilot of the Future. Jim was hooked: “I adored the story lines! But even more, the fabulous artwork of Frank Hampson, and later Frank Bellamy,” he enthuses.

Jim’s obsession with aviation continued to grow unabated, chiefly expressing itself in an assortment of increasingly futuristic drawings. “Common sense dictated that I should have gone straight from school to art college,” Jim smiles. “But my heart spoke louder than my brain!”

And so in the spring of 1966, 18-year-old Jim was inducted into the RAF as a trainee pilot. Things didn’t work out. “I never achieved the exalted status of fighter pilot – though that was very much my ambition,” he sighs.

“It seems so long ago,” Jim recalls of his Royal Air Force days. “And in such a bizarre conjunction with my life now that it acquires a more and more dream-like quality as the years go by.” With feet firmly on the ground, Jim continued to reach for the sky by embarking on a

foundation course in art and design at Newport School of Art.

FOSS THINGS FIRST

“I can’t pinpoint the date,” says Jim, “but it was when I first saw the work of Chris Foss spread across a Sunday colour supplement article, sometime in the late 60s.” That was when the penny dropped: “In that moment I realised there was a potential career for me in this rather peculiar discipline.”

The budding artist began working towards his new goal. “Everything I painted was informed in some way by that revelatory moment.” Six years after signing up as a flyboy, Jim finished his first commission for Sphere Books, for a war-time thriller, called *The Lost Command*, gloriously executed in pencil and coloured crayons. ➔



THE ILLUSTRATED MAN

From *The Illustrated Man* by Ray Bradbury. “Who could pass up the chance to illustrate one of the great short story collections?” asks Jim.



VENUS PRIME 4

Jim produced covers for the series of Arthur C Clarke's *Venus Prime* novels, written by Paul Preuss.



ARMOR

Jim's cover for *Armor*, showing John Steadley's “augmented soldier of the BEM-infested battlefields of the future!”

Artist PROFILE

Jim Burns



Born in 1948, the illustrator has a flare for realising the imagined future worlds of sci-fi literature in paint and pixel. His work for authors including Isaac Asimov, Robert Silverberg and Peter Hamilton mean his universes are carried in the minds of generations of fans, world-wide. A prolific artist, he still works for print and collectors.

WEB: www.jimburns.co.uk

Jim Burns

Gallery

Interviews

“When I first saw the work of Chris Foss, I realised there was a potential career for me”

The full illustration for The Naked God, the final book in Peter F Hamilton's Night's Dawn Trilogy.

The full illustration for The Naked God, the final book in Peter F Hamilton's Night's Dawn Trilogy.



PANDORA'S STAR

Jim is proud to have produced all the covers for Peter F Hamilton's books. "It's fantastic to be so connected with such a huge talent."



“Even at the age of three or four I loved drawing cars and aeroplanes”

THREIXEPIA'S LITTLE SISTER

Originally commissioned as a Heavy Metal magazine cover, this now adorns the cover of Imago, Jim's latest collection.



HEARTS, HANDS AND VOICES

Jim imagines a strangely altered biotech future for Ian McDonald.



➤ Having worked for some of the biggest names in sci-fi – even brushing shoulders with Syd Mead over the concept work for Blade Runner – Jim is assured his place in history. However, he is typically self-deprecating about his talent. “I would say I’m technically competent but somewhat pedestrian,” he claims.

It’s startling to learn that, even at the level Jim has reached, there’s still an element of doubt in there. “The whole thing is redeemed by a rather good imagination and the ability to convey my ideas into paint,” he reasons. So it must be true that an artist is never satisfied with their work.

Asked if he’d like to visit any of the worlds he’s envisioned for sci-fi fans the world over, he’s unequivocal. “Most of them look like dystopian hell-holes, so I think I’ll stay put in Wiltshire!” A seat on the next manned space flight, then? “That I could not resist.”

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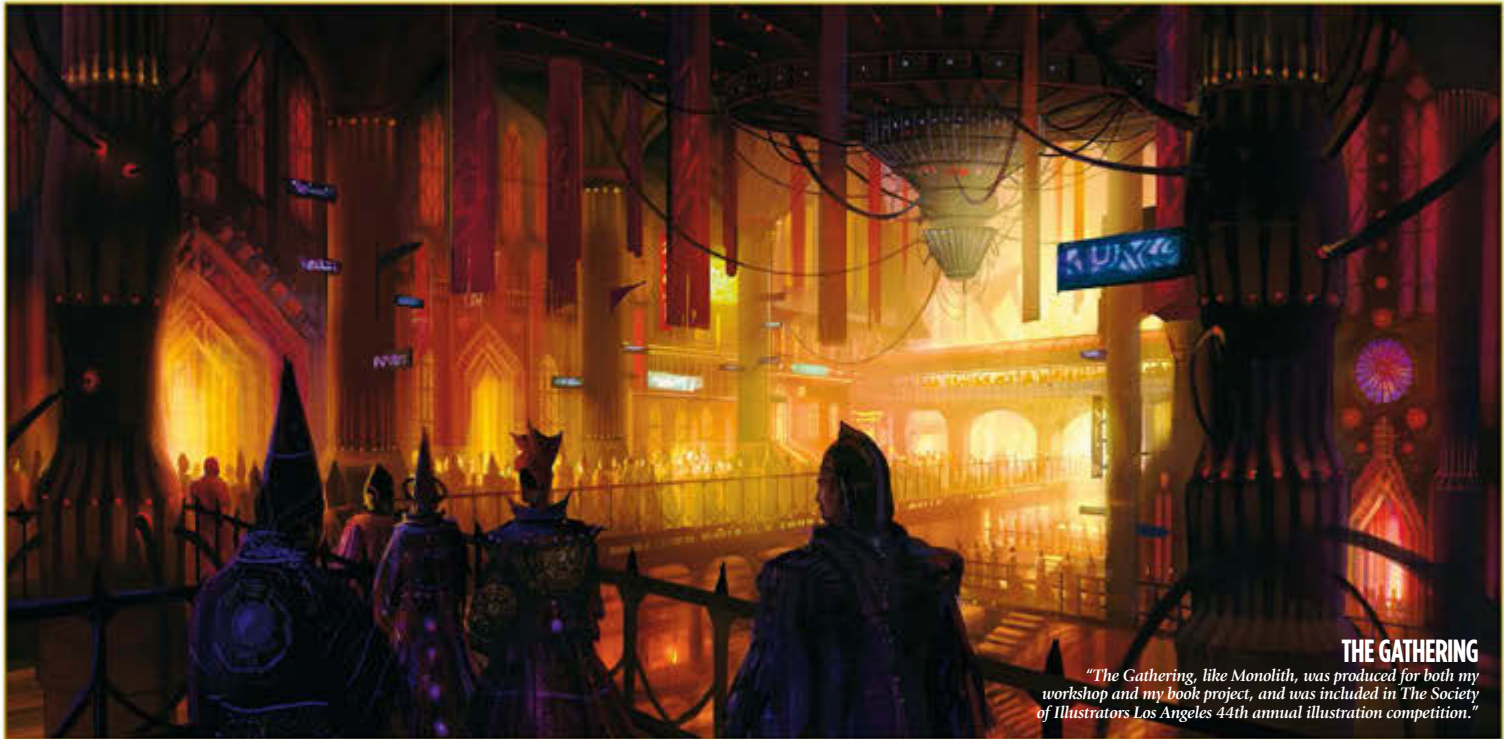
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THE GATHERING

"The Gathering, like Monolith, was produced for both my workshop and my book project, and was included in The Society of Illustrators Los Angeles 44th annual illustration competition."

Philip Straub

"In a way I consider some of the more fantastic work I've done a glimpse into my subconscious." This award-winning artist gives us a peek under the hood

SW hen I'm painting," says Phil, "I usually enter into a dream-state where it's as if everything else around me falls away and I'm focused on creating the alternate world that's developing on the canvas."

As art director at Warner Brothers, Phil needs to be on top of his game, so trances and the like aren't mentioned lightly by the artist. "This is something you'll rarely hear artists talk about," he acknowledges, "but it's this euphoric feeling that keeps us coming back."

MULTI-TASKER

Phil regularly gets asked how and why he became an artist, "and the more I'm asked, the more I realise I never actually chose this life, it chose me." The urge to be creative was there from the word go. "I've just been lucky enough to make a living doing art."

Phil is noted for his chameleon-like versatility and, interestingly, his drive to create has always been pretty free in its associations – short stories and poems,

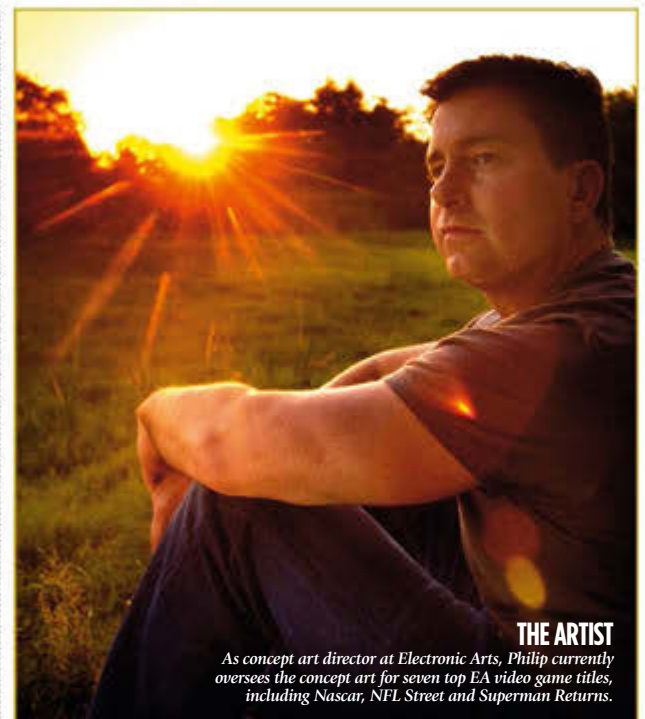
drawing, watercolour or oil paintings – as long as it was creative, Phil was there. Naturally, a degree in fine art beckoned.

BIG BREAK

Art courses rarely do much to prepare students for the world of work, and Phil's degree in fine art was no exception. "When I graduated, I really had no idea how I was going to make money as an artist." This didn't remain a problem for long.

Right out of college in 1995, Phil clocked on as a digital painter and illustrator with the well-known children's book author and illustrator Mercer Mayer. "It really was a stroke of luck that I received a call from Mercer Mayer's studio," he admits. "I owe him quite a bit for getting me my first big break." At last count Phil had provided illustrations for more than 30 books.

Trained as a traditional oil painter, for Phil this job was his introduction to digital art. He remembers Mercer having this crazy thing at the studio called a Wacom tablet. "I thought it was the coolest invention in the world." It may well have been if it



THE ARTIST

As concept art director at Electronic Arts, Philip currently oversees the concept art for seven top EA video game titles, including Nascar, NFL Street and Superman Returns.

WHERE FEARS ROAM

"This illustrates a location depicting another human emotion, fear. The shows have been good to me with this one appearing in Exposé 3, Spectrum 12, and winning the Silver award in the Society of Illustrators of Los Angeles' 44th annual illustration competition."

Artist PROFILE

Philip Straub



AGE: 40

COUNTRY: US

From books to feature films, his

work displays a sure-footed sense of style and composition. his fantasy work perfectly illustrates his love of the arcane.

SOFTWARE USED: Painter, Photoshop

WEB: <http://ifxm.ag/pstraub>



INTERESTING LESSON

Aside from his day job and freelance illustrations, Philip teaches concept art classes at EA University in Florida. Does he ever have any time off?

➤ weren't for the software. "They were using a program I'd never heard of – Photoshop!"

MAKING ART

Though he was trained traditionally the digital stuck. "I always begin my paintings digitally, and I have for a while now. Painter and Photoshop have such a variety of tools for sketching that I actually feel more comfortable with my Wacom pen than with a pencil. It's kinda scary!" he admits

Having overcome his fear, he usually begins by defining composition. "With a 50 per cent grey canvas, I start by creating simple abstract values and shapes that are pleasing to the eye." Then, depending on

ease. He puts this down to the different experiences he's had as a student and professional artist. But there has to be more to it, otherwise everyone would be versatile.

Working on a variety of licences – from movies like Jurassic Park and Superman to children's books and Fisher Price – has, he insists, "forced me to develop an ability to change my style to cater to a particular project." At first it sounds limiting in terms of personal expression but he has found the opposite has been true. "I've ultimately created a few different personalities to my work," he tells us.

These multiple personalities include "a flat-graphic style I work in for some of the

“Photoshop has such great sketching tools that I feel more comfortable with a Wacom pen than a pencil now”

whether the piece is personal or commissioned, "I either just let the shapes form into something interesting based on a simple idea or I begin refining down."

"Once the composition is settled I shift my focus to figuring out an interesting lighting solution for the piece, or defining my staging." Working as a professional artist has given him an in-built discipline, a programmed understanding of the creative process, and this frees him to concentrate on expression and style.

VARIETY IN STYLE

It's rare for an artist to successfully pull off more than one style, yet Phil does this with

licensed products and a more realistic approach for the fantasy work. Then there's the children's book style, which applies my studies of classic animation backgrounds from working on Disney licences." And finally matte painting, "a result of working in the entertainment industries that has its own set of rules."

BORN FREE

It must get crowded inside Phil's head, so he's started letting his ideas roam free. "I've always touched on fantastic themes in my work, but I really began to explore the genre a couple of years ago." The reason for the delay wasn't one of taste but of skill. "I ➤



THE NIGHTMARE FACTORY

"Another location from my book project, *The Nightmare Factory* attempts to visualise a place where nightmares are manufactured. It was included in *The Society of Illustrators* 43rd annual illustration competition and was awarded the CGChoice award."

Philip Straub's ART IN FOCUS

Making a monolithic scene from another world

This image is one of the first 50 pieces from Phil Straub's book project *Utherworlds*. "The book was a good few years in the making. It focuses on a group of travellers who navigate through a world which draws its visuals from human emotions."

"The colour choices for *Monolith* originate from the location it illustrates in the book," explains the author. "Each has a unique palette, lighting and value structure."

Likewise, the mood is derived from the story, "but I tend to try and create the most dramatic mood possible," he explains. "This ensures every image has the wow factor."

Wow factor aside, Phil is something of a perfectionist. "I'm never really happy with the final result of my images," Phil says. "Even so, *Monolith* is one of my favourites right now, but that will change quickly as I create new images and try to get better with each painting."



"In Photoshop, try using the Overlay option in your layer palette on a separate layer from your sketch to quickly add colour to a value study. You can use the Gel layer in Painter the same way."

Gallery

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MONOLITH

"A painting created for Utherworlds and the Environment Concept Art class I teach over at the CGSociety. Monolith was included in Exposé 4, and also Spectrum 13."



COHABITATION

"This image illustrates one of the many locations that defines the world in the story I'm working on. Cohabitation was included in the Society of Illustrators Los Angeles 43rd annual illustration competition, won the CGChoice award and was included in the books *Exposé 3* and *Digital Masters*."



PHILIP STRAUB'S

Artist tip

A SMALLER VIEW

"A totally overlooked nifty little trick. When painting full screen, avoid getting caught up in the details by using the navigator to double-check that your image remains successful as a thumbnail."

THE CONJURING

"Another painting for my book project *Utherworlds*, *The Conjuring* is in the same family as *Where Fears Roam* and *The Nightmare Factory*. It was also included in *Spectrum 13*."

➤ think I only dabbled before then because I felt like I needed to master reality before I could begin to alter it in my work."

There's a strong body of evidence in favour of this approach, the classic example being jazz music but, lucky for us, Phil couldn't resist the pull of the fantastic forever. "I find it much more interesting and exciting to create worlds and characters that don't exist in our reality than to paint just regular realism."

There's nothing wrong with realism per se, he says. "I definitely enjoy doing realism, from matte paintings to landscapes, but it's truly inspiring to create something that's hopefully unique to me and my vision." Not only that but fantastic imagery plugs directly into something very human. "It enables me to create a visual metaphor for my emotions or personal experiences."

ART THERAPY

While his commercial work may be dictated by the tastes and desires of his audience, his personal work tends to deal with human emotions and human experiences. It's a kind of aesthetic therapy, which sometimes veers into metaphysics. "The question of what exactly is real in human existence is a subject I find fascinating."

The problems that have obsessed mankind for millennia continue to inspire. "The fact that our reality is only based on the senses that we use to navigate through our environment begs the question, just what is reality?"

Art has a valid claim to being the most honest answer to this type of question, the

Warner Brothers Phil was studio art director for EA. "An average day at EA was usually pretty crazy but, I guess, that's the way I've always liked it," he recalls.

The games industry is fast-paced, so it requires quite a bit of determination and discipline if you are to advance. And although he fell into games Phil has done just that: "The concept team I ran [at EA] worked with all seven of the project teams at the studio, as well as marketing." This means lots of work, all day long. Depending on the day, while at EA, Phil would be interacting with five or six art directors and executive producers to help the teams reach their visual goals. Then there were the inevitable barrage of emails and meetings.

If that doesn't seem like a busy schedule, Phil other ideas. Lots of 'em. His freelance illustrations have appeared in over 30 childrens books, he teaches online concept art classes and was co-founder of CGSociety, one of the leading web art forums. While his licensing work has appeared on everything from CD cases to book sleeves, magazine covers to trading cards, feature films and advertising campaigns.

And he's determined to continue growing his licensing business, especially his children's book work that he sees as a real challenge. He's keeping busy producing concept art. for Warner Brothers, again, the man likes to work.

It's no surprise that Phil likes a challenge. "I like sinking my teeth into something that potentially has a big reward in the end." And there's no reward quite like a successful painting. "I just want to make cool art!"

“That our reality is based on the senses we use to navigate our environment begs the question, what is reality?”

subject finding its own way to expression through our visual language. "It's a springboard for imagery that enables layered symbolism and multiple interpretations," Phil explains, philosophically.

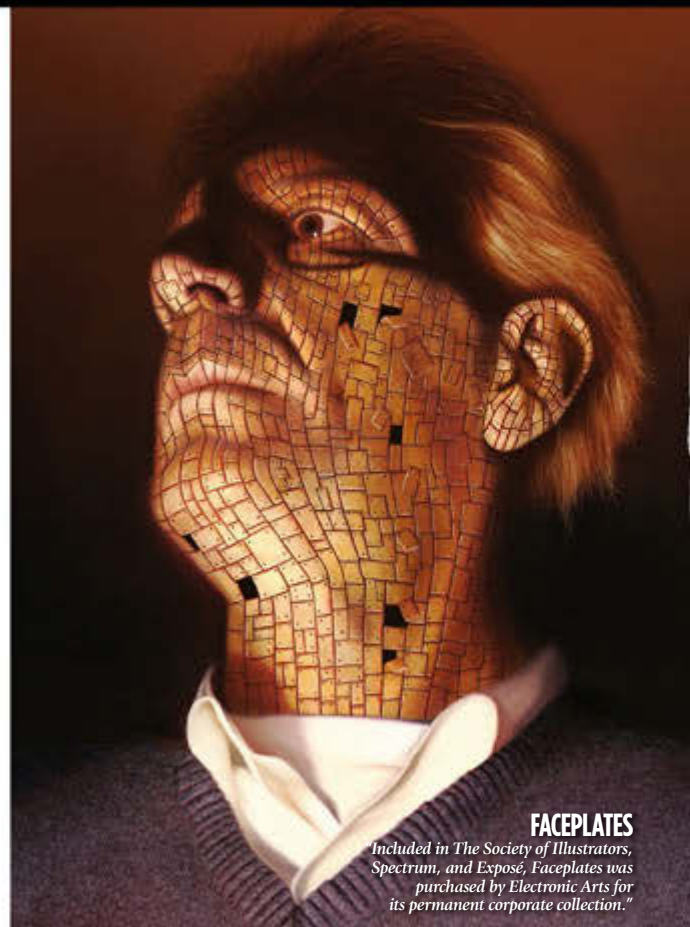
And if you can get a handle on all this then your output will be powerful stuff: "The darker human emotions: fear, greed, and nightmares are favourite subjects of mine in that their visual metaphors are seemingly limitless."

ELECTRONIC ARTS

Suitably enough for a man with these issues knocking around upstairs, Phil works in an industry which is rapidly generating a series of alternative realities. Prior to working at

Workshop
PAINT LIKE PHILIP STRAUB

For your chance to create incredible concept art in the style of Philip Straub, head over to his website at <http://ifxm.ag/pstraub> where he will lead you through the best of his work...

FACEPLATES

Included in *The Society of Illustrators*, *Spectrum*, and *Exposé*, Faceplates was purchased by Electronic Arts for its permanent corporate collection."

Philip Straub's VITAL STATISTICS

Hates heights and being a perfectionist



Place of birth?
Syracuse, New York, US.

Date of birth?
5 July 1973.

Current location?
Maitland (Orlando suburb) Florida, US.

Favourite music?
Really hard to nail it down to one specific type. I enjoy quite a few different styles of music. Progressive rock/metal is definitely one of my favourites but I like classic rock, jazz, and metal, too.

Favourite traditional artist?
Another tough one. I'll name a few from different genres. In the illustration arena I really enjoy Michael Whelan's work. He balances symbolism and classical fantasy brilliantly. Within the

surreal movement I really like Salvador Dali, as well as modern contemporaries Daniel Merriam, Michael Parkes, and Gil Bruvel.

Favourite digital artist?
I really enjoy Craig Mullins' work as well as matte painter Yanick 'Dusso' Dusseault.

First memory?
Falling down the stairs at the age of two or three.

Average time spent on each image?
Probably 20 hours, although it does vary quite a bit depending on subject matter and the style.

Most annoying personal trait?
Being a perfectionist and also a workaholic.

Any pet hates or phobias?
I have a small fear of heights and flying (although I've been forced to overcome the latter).

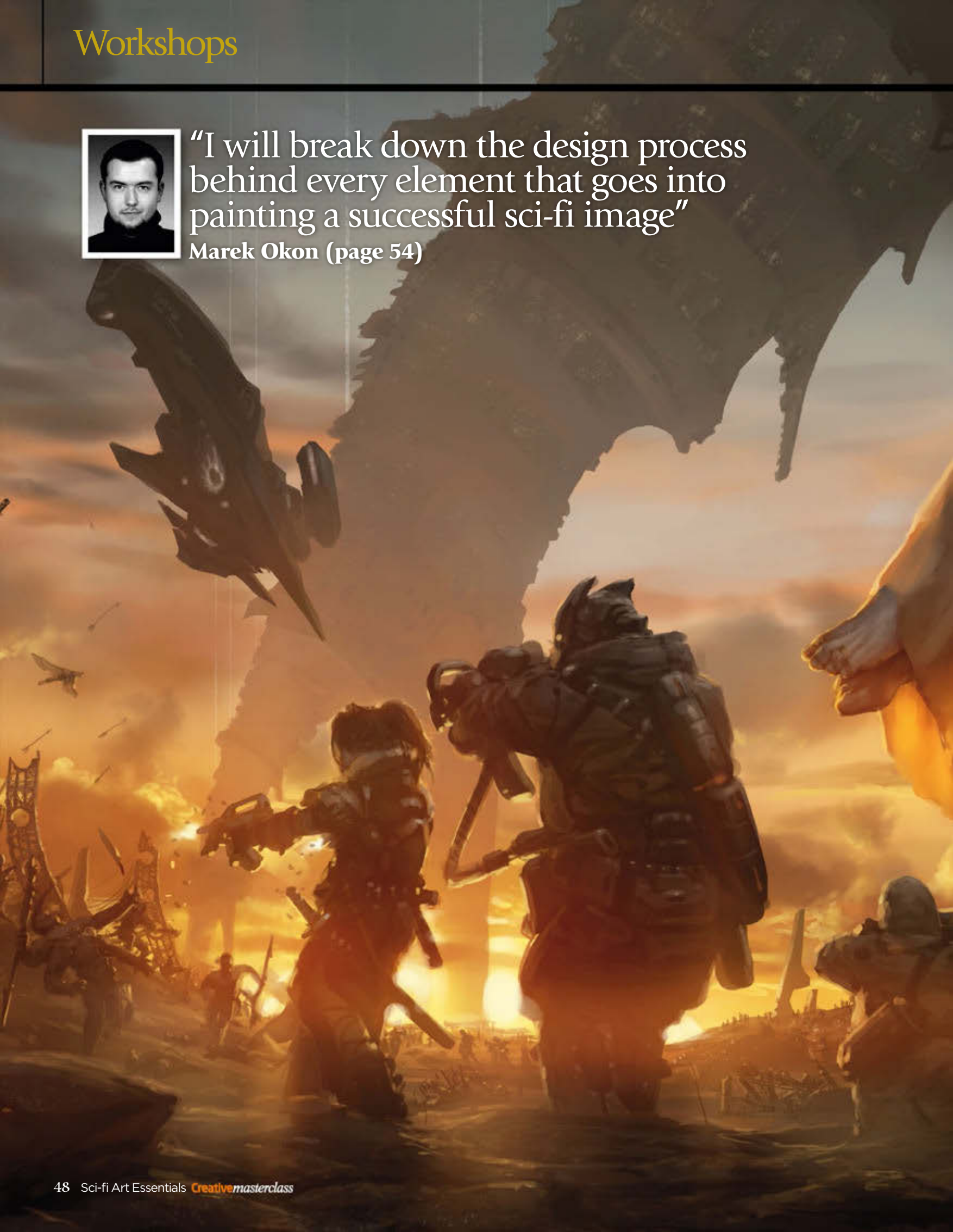
Single most important piece of professional advice?
Practise, practise, and practise! Be relentless, and believe you can accomplish anything that is important to you.

Left or right-handed?
Right-handed.



"I will break down the design process behind every element that goes into painting a successful sci-fi image"

Marek Okon (page 54)



Characters

Whether designing heroic sci-fi characters from scratch or painting pulp era sci-fi scenes, this chapter will develop your character design skills and your ability to create a story within your painting.

Featured artists



Aly Fell



Aly is a 3D artist and modeller from Derbyshire. Right now he's a full-time freelancer, but

he's also worked for Eurocom Entertainment Software, Core Design and Cosgrove Hall, where he was a character art specialist, and has worked on gems like Dangermouse, Count Duckula, Avenger Penguins and Discworld.
www.darkrising.co.uk



Francis Tsai



Francis is a freelance conceptual designer who has worked in many fields, including

games, comics, film and television. His clients have included DC Comics, Dark Horse Comics, Marvel, Mattel, Midway, Upper Deck, Warner Bros, Wizards of the Coast and a whole host of other familiar fantasy favourites.
www.teamgt.com



Daryl Mandryk



Daryl is an artist living and working in Vancouver in Canada. He specialises in

entertainment design and illustration work, and has created artwork for Electronic Arts and Disney Interactive, among others. He now enjoys working full-time on a range of freelance art projects.
www.mandrykart.com



Marek Okon



Marek was a web designer in his native Poland until a couple of years ago, when he saw the light

and decided to devote himself to digital painting. Now he's doing book covers and illustrations for a range of publishers, and really enjoys mixing sci-fi and fantasy into his work. He's the perfect man to paint heroes.
<http://ifxm.ag/marek-o>



Loïc Zimmermann



Loïc was born in the Champagne region of France, but currently resides in San Francisco where

he works for Luma Pictures, as both a concept artist and lead character creator. He graduated with a masters' degree in fine art and has been a teacher, CG artist, lead artist, character modeller and artistic director in his time.
www.e338.com



Marc Brunet



Marc is a concept artist as well as a next-gen character artist working for Blizzard

Entertainment. Before that, he worked for Artificial Mind & Movement for two years. Currently a resident of Irvine, California, he was born in Montreal in 1986 and has been crazy about art ever since then.
<http://ifxm.ag/marc-b>



Photoshop
**CREATING A SYD
MEAD INSPIRED
ILLUSTRATION**

Francis Tsai takes his cues from Syd Mead's amazing work on Blade Runner to produce a cover worthy painting

Artist PROFILE

Francis Tsai
COUNTRY: US



A career path beginning with degrees in physical chemistry and architecture led Francis to art jobs in the video games industry. He's also worked in the comics, TV and film industries. In 2010 Francis was diagnosed with the degenerative neuromuscular disease ALS, but thankfully he's still able to paint using eye-gaze technology. www.teamgt.com

GET YOUR RESOURCES

See page 226 now!

For me, as for many others in the entertainment design community, Syd Mead's work on *Blade Runner* has always been a huge source of inspiration. The designs for the sets, vehicles and props have a high-tech, science fiction vibe, but at the same time feel very rooted in reality. This is in no doubt due to his training and earlier career as an industrial designer (including designing cars for Ford), in which real-world concerns like budgetary and engineering constraints inform the design process.

For this workshop I'll be borrowing heavily from Syd's catalogue of designs and illustrations for the movie *Blade*

Runner, and also bringing in certain influences from the movie itself, in terms of mood, lighting and character. I'll combine those elements with some of my own techniques in digital painting to create an illustration that pays homage to both the designer and movie.

“For me and many others, Syd Mead's work on *Blade Runner* has been a huge source of inspiration”

My process isn't really as orderly as it probably could be. I have a definite end point in mind, and a few strategies along the way that have helped me in the past

with other illustrations – but there will be some back and forth along the way.

The overall look and feel of the world, and a significant prop design or two will come from Syd's work, while some of the mood and lighting will reference Ridley Scott's vision of the movie. Layered on top

of that will be a bit of my own take on the *Blade Runner* world, along with my scattershot painting technique, which will hopefully tie all those elements together.

1 Initial thoughts

When the ImagineFX team contacted me about doing a piece paying homage to the design work of Syd Mead to go on the magazine's cover, they had a few suggestions in terms of subject matter. Signature elements like the retrofitted architecture of 2019 Los Angeles, specific vehicle designs like the Spinner police car, the pervasive neon lighting, rain – these were just some of the things the team mentioned that could highlight a police officer or replicant character.



2 Thumbnailing

After a bit of pondering, I do two thumbnail sketches. The first is a simple standing pose featuring a female police officer, or *Blade Runner*, in front of the iconic Spinner vehicle, with a backdrop consisting of a night-time, neon-lit, rainy city street. The second sketch is more of a re-creation or re-imagining of a scene from the movie, in which a rogue female replicant is dangling a *Blade Runner* policeman over the edge of a rooftop, with the city street and Spinner more in the background than in the first sketch.



3 Sketch approval

The ImagineFX team picks the first sketch, and suggests a scene from the movie for inspiration, showing Harrison Ford reading a newspaper in front of a storefront window that's lit up with pink and purple neon. They also send me a file containing the cover text and graphics, as well as a mock-up of the composition with the new cover elements. The text and graphics were done in a colour palette influenced by the scene from the movie, and provided a basis for the palette of the painting as well.

The two initial sketches (above and above right) incorporated similar elements – the futuristic street scene and the Spinner vehicle – but shifted the focus onto different characters. The female police officer was chosen over the action scene on the rooftop.



4 Assembling references

Being a big fan of Syd Mead, as well as a giant fan of Blade Runner, I have plenty of reference and inspirational material in the form of Syd's books and a director's cut of the movie (which I have playing on a separate monitor while I work on the painting).

For the figure, I reference some stock photography from an artist named Marcus Ranum, who provides a huge variety of model photography at his website <http://ifxm.ag/mj-ranum>.

I use an image from his Sky Captain series (which Marcus has given me permission to show here), showing a steampunk-influenced character standing in a cool action heroine-type pose. I end up tweaking the figure a bit here and there, adding an upraised arm brandishing a blaster (based on another of his photos of a pirate), but the model's pose was spot-on.



5 Location reference

I also pull a few photos from my own collection, from a recent trip to Japan. This is a shot of a neighbourhood in downtown Tokyo, taken right after a rainstorm. The scale and density of the street, as well as the interplay of lights and signs in the wet surfaces, were elements I wanted to include in the environment.

PRO SECRETS

Fast fingers

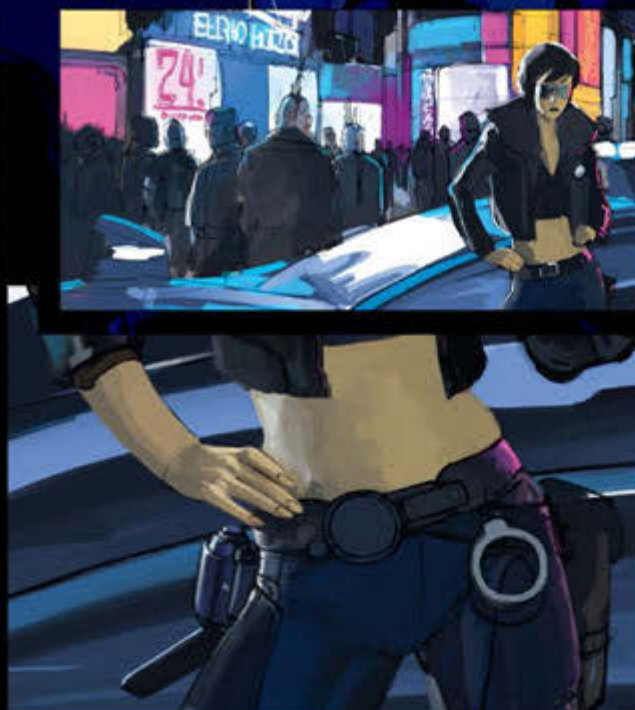
My left hand usually rests on the keyboard so I can quickly hit various hot keys and shortcuts. I noticed not too long ago that I was using the base of my thumb to push down the space bar so I could quickly pan around the image. This also enables me to easily hold down the space bar and press Ctrl/Cmd with my pinky, which brings up the Zoom tool without having to select it from the toolbox.

6 Colour palette

For the next phase, I refine the illustration a bit, establishing a colour palette based on the cover graphics and the screen grab. I also add a few elements that I wouldn't ordinarily add until late in the process, including rain and glow effects. I add these on separate layers, including them at this stage to give the editor a more accurate impression of what the final art would look like.

7 Back story

At this point a bit of back story is already forming in my mind for the character. I want the character to have a certain level of sex appeal, but not in such an over-the-top way that she'd have no credibility as a futuristic street cop. It is important to convey a sense of power and confidence. I feel some wraparound shades will serve a number of purposes – invoking the visual of the typical American cop's mirrored sunglasses, referencing the cyberpunk mirrorshades aesthetic and providing a reflective surface that echoes some of the colours in the environment. Obscuring the character's eyes also heightens the sense of mystery, subliminally adding to the "is she a replicant?" factor.



8 Refining

I keep a layer on top of the painting containing the cover text and graphics so that I can easily see what will be obscured by it in the final art, and then turn it off once all the major elements are blocked in. I feel pretty confident about the background environment, but know the Spinner will require a fair bit of attention, as it's kind of the co-star of the image. The curvy, bulbous form proves to be a challenge to correctly portray in terms of perspective, and I end up eyeballing it into shape, with a lot of tweaking and adjustments.

Characters Paint like Syd Mead



9 Reflective surfaces

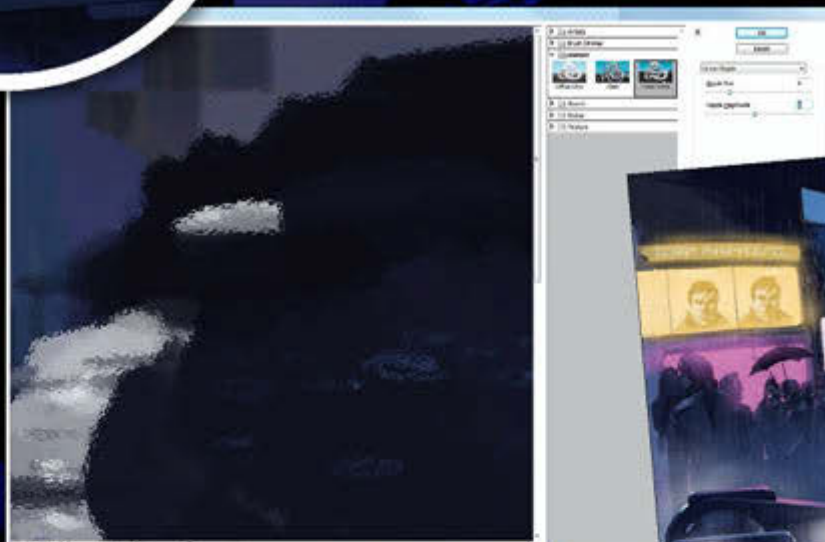
Aside from the car's form, the reflections in the metallic surfaces present another mix of challenge and opportunity. Accurately rendering vehicle highlights and reflections is a whole other aspect of industrial design that almost seems like alchemy to me, but it provides another chance to echo the environment colours. As a bit of a car fanatic I've looked at a lot of vehicle renderings, but for some reason I've rarely been called upon to produce one. Luckily, I have the benefit of adding logos and graphics on the car to distract the eye a bit!

11 Last five per cent

It's been my experience that the last five per cent of an illustration tends to take at least 50 per cent of the time. That's the case with this image as well, and there was plenty to work on. One bit of useful feedback that my friend and former boss Farzad Varahramyan gave me was to add some separation between the various layers in the scene, to increase the sense of depth. Adding some mist behind the Spinner but in front of the crowd helps push them back a bit. Some atmosphere also pushes the storefronts and noodle stands further back in the middle distance. Finally, massive high-rises are implied in the far distance, their scale established by the tiny pinpoints of light indicating lit windows.

12 Final touches

I also want to keep the rendering a bit looser in the background characters and environment. The graphics and logos on the Spinner are pretty closely based on the movie vehicle, although I do take some personal liberties here and there. The main character's outfit is totally made up, and has much more of a motorcycle cop aesthetic than Deckard's outfit had in the movie. The choice here again is made to take advantage of the wet and reflective feel of the image, and some of the same colours and graphics from the vehicle are incorporated into her outfit. Finally, a subtle colour adjustment layer, some indication of rain splashes on the ground and some texture on the road surface are the last things I add before shipping the final art off.



PRO SECRETS

Quick new layer

Although it kind of feels like I'm trying to do a Vulcan mind meld on my keyboard, I'll sometimes use the Ctrl/Cmd-Shift-Alt/Option-N combination to quickly create a new layer in a Photoshop document.

10 Filter effects

Ordinarily I don't use a lot of filter effects. This isn't necessarily because of some personal prejudice against them, but more because I haven't really figured out how to use a lot of them in a way that seems natural. Having said that, one effect I do find useful in this particular case was the Ocean Ripple effect in Photoshop, which helps to add a bit of the distorted reflection feel to the wet street surface.

The finished image. The foreground will be covered by text on the front cover, but the policewoman's reflection isn't the only way that a moody, rain-soaked, neon-lit atmosphere has been conveyed.



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CREATING AN EPIC SCI-FI PAINTING

Marek Okon reveals his thought and design processes behind painting this stunning sci-fi image ➡



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Core skills
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Artist PROFILE

Marek Okon

COUNTRY: Poland



Marek moved into digital painting from web design six years ago.

His main love is painting sci-fi and fantasy subjects, and he mostly works on book covers and illustration.

<http://ifxm.ag/marek-o>



GET YOUR RESOURCES

See page 226 now!

Whether you're an established illustrator or just starting out in the concept art world, after you've done a few images and spent a bit of time on illustrations you're sure to reach the same conclusion. Knowing how to paint is not all that matters: it's important that you know what to paint as well.

That may sound obvious, but it's not as easy as it seems. While some clients will give you the freedom to paint whatever you want without interfering with the

subject matter, the vast majority will want you to paint specific subjects and themes.

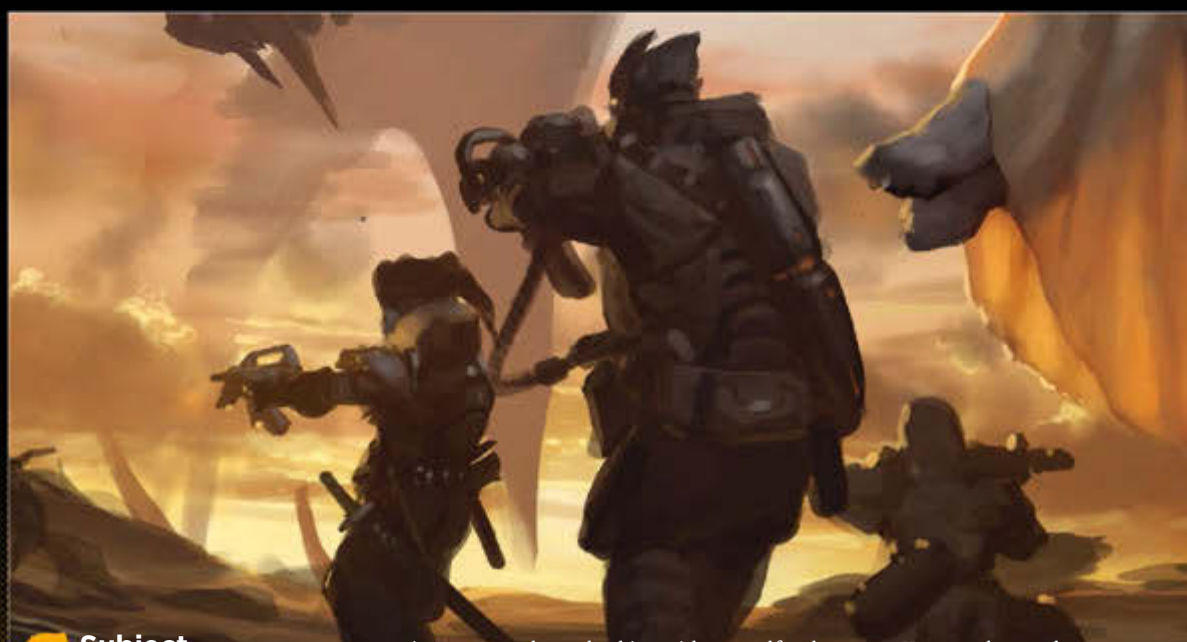
It's down to you, as an artist, to get the job done, to put on the canvas or the screen elements that will define without a doubt the idea behind the brushstrokes, and sell the image to the client or viewer.

In this workshop I will break down the thinking and design process behind every element that goes into painting a successful sci-fi image.

I use pretty much the same method with every big picture I do, so you can

follow the same steps for many different types of image. I'll also discuss how to create a successful sci-fi environment, and what painting techniques I use to best present my image.

This workshop will be more about why than how I paint certain things in the way that I do. As Syd Mead once said in an interview with ImagineFX, "idea trumps technique every time," so let me show you my thought process behind my pictures, supported with some tips on how to you can most effectively present your idea.



1 Subject

Sci-fi is one of my favourite subjects. It enables you to show off your imagination, your technical thinking and design skills. That's especially true if you're painting something that has a purpose in the world presented. It's

important to keep checking with yourself what the purpose is of the object you're painting, and to consider how someone might use it, or why it looks the way it does. This helps add sense to your world.

In general, you can divide sci-fi into two categories – technology and

characters. You can show a character operating a technological device, but your illustration must focus on one specific topic. I often see illustrations that want to show too much at one time. Remember what it is that you want to show, then show it in the best way that you can.



2 The elements of good sci-fi

In my mind, I start collecting the elements of traditional sci-fi paintings: massive megastructures, a spaceship, its crew, a strange alien world... Personally I prefer images that focus on characters, because it's easier for viewers to connect with the scene. Characters also help you tell a story with your image. So I imagine up a young, dashing space captain with an alien queen in his arms, waiting for his ship to pick him up. That's the core idea around which I base my image. While elements may change, that core idea should remain intact, otherwise you're just painting a different picture.

3 Developing your idea

I've got the core idea nailed, so the next thing to do is to embellish it. I've got the central figures for the image – the space captain and the alien queen in his arms. I've got the backdrop of the strange alien world, the massive megastructure, the spaceship and its crew. But I need to add more life to it. So I decide the space captain and his crew should be waiting for the spaceship to land and pick them up. Landing spaceships always make a bit of a mess, which will make the image less static, but I'm still not happy. I think some of this will appear forced – why's the alien queen there in the first place? Then I realise what I need – natives! My story is complete. The space captain has rescued the alien queen from the natives and is running to the meeting point for his ship. His crew is covering his back.

4 Why bother?

You might be asking yourself, does the story really matter? That's a lot of time spent procrastinating before really getting into the painting process. Many artists might think "why can't I just draw a great big spaceship in space, where it belongs?" Of course, there's nothing to stop you doing that. You can still create a great picture that way, but without a story to back it up, people will forget about your image all too quickly.

What's more, if a client has commissioned you, they may have a story already, and they'll want you to add in all the elements of their story. The better you piece these together, the more likely you are to get hired by them in the future.

5 Environment setup

I start by painting the environment, then the background and finally characters, keeping everything fast and loose. The setup of the environment is essential to define the mood of the whole picture. If you want a sad feel, make it grey and rainy, or if you want it to be scary, set your image at night time. For this image, I go with a sunset scenario, which is one of my favourite settings to paint and is good for the energetic battle feel that I am trying to convey.

Next I add the background to the image. I start this by drawing a horizon line, then add some initial terrain. I'm trying to shape it in a way that will create a nice composition.

PRO SECRETS

Check your values

It's important to constantly check the values in your image to make sure you don't mess up hierarchy and composition. I use a simple black layer in Colour mode on top of my whole picture, and turn it of and on when I need it. This way you can quickly spot any mistakes you made and fix them accordingly.

8 Painting the sky

I start with some gradients to fill out the sky. First there's pale orange at the horizon, next is saturated orange mixed with stripes of red, and finally pale blue sky that gets darker the higher it goes. Be sure not to make it too dark, though – it's still one of the main light sources in the image. On top of that I add in some clouds of varying shapes and sizes. Some are more transparent and light, some thicker and heavier. Don't worry if your colour picks seem a bit awry at this stage – they can be easily corrected by applying a nice, orange gradient in Overlay mode to the image.

6 Megastructure

As you can see here, a strong composition element is the curvature of the megastructure, which is practically dragging viewers into the centre of the image. I paint in the main characters – space captain with the queen in his arms, his crew behind him, and the spaceship trying to land. Finally I add natives attacking wildly from behind, trying to get the queen back.



Shortcuts

Group layers

Ctrl+G (PC)

Cmd+G (Mac)

For easy layer management, use this shortcut to quickly group selected layers into a folder.

7 Real-life reference

The human eye is far better than a camera is at compensating for large contrasts in light. For example, think of when you walk into a dark room on a sunny day. Everything outside the window appears very bright as your eyes adjust. This is called high dynamic range. So, when encountering a light source as strong as the sun, cameras can't get enough information about other

light sources present during sunset. That's why, when you photograph a sunset, you get a nice, colourful sky, and everything around it is pretty much black. But the human eye can deal with this much more efficiently, so even during sunset you can still see everything around you clearly. That's all thanks to the sky dome, which provides an ambient, bluish secondary light source.



9 Characters

I like to paint my characters after I have established the environment they will inhabit. That way, all light sources and ambient influences are already taken into account. The shading of the characters is pretty simple, with the sky lighting them from above and the sun casting a strong backlight over them.



10 Polishing the captain's helmet

Here I pay particular attention to the space captain and alien queen designs, which I think need a bit of polish. They go through a variety of changes as I play around with the concepts a little. I was concerned that my initial ideas were too simple and generic looking – they just didn't have the out-of-this-world sci-fi appearance I was looking for to suit my story. So, after some experimenting, I came up with this, which I think is much more suitable. I particularly like the captain's suit design and his weird, partially organic helmet.

PRO SECRETS

Colour and contrast correctors

To add some different perspectives to the image, I use a folder of adjustment layers that can be easily modified as needed. In this folder you can keep a few colour correction layers and some contrast adjusters, and use them to enrich your colour palette. When you're done you just hide the whole folder and quickly get back to work.



11 A further note on characters and light

An important thing you must consider while painting the characters is to remember that the sky dome is all around them, and so is the light it emits. So there's a bluish light not just in front of them, but also at the sides. There are also subsurface scattering effects (that's light shining through objects), which are particularly noticeable on the queen's semi-transparent dress and veil.

Shortcuts

Color Balance

Ctrl+B (PC)

Cmd+B (Mac)

Quickly open the Color Balance palette to help adjust colours in your image.



12 Finalising the background

I want to make the megastructure in the background of the image really big and inaccessible from the surface. To indicate its size I apply strong air perspective (an indicator of great distance), use very low contrast just to hint the details, and cast strong atmospheric bluish haze to show how high and far this structure goes. As with previous elements, I use an orange overlay on one end of the structure to melt it into the sunset.



13 The spaceship

I follow a very similar technique to the one I used on the megastructure to finalise the spaceship, which is trying to land to collect the captain and his crew.

Notice how details disappear further into horizon: that's due to the effect of air perspective, which I previously mentioned. I can apply this, on a smaller scale, for the spaceship. I add a colour overlay effect to easily adjust the amount of air perspective on the ship, thus placing it correctly in the image.



15 Final tweaks

I use a few Overlay and Colour Balance layers just to make sure that everything goes well with the setting sun. With sunset environments it's crucial that you keep your values right, otherwise your lighting will look fake and unnatural. A final tip if you're thinking about creating future technology designs, is to make them original, yet recognisable. All the elements you put in a picture should lead to the goal you set yourself at the beginning of the painting process. In this case, it's an epic sci-fi story.

Now add some lava!

For tips on how to create realistic looking lava to your dramatic space scene, see Marek's guide to creating in our Core skills section.



TURN TO PAGE 215!



14 The natives

When I first thought up these characters, I just wanted them to be a bunch of primitive, bloodthirsty mutants. Then the idea of a crazy bishop leading them into battle popped into my

mind. I liked it, so I utilised it, but it meant I had to change the environment slightly. Instead of the deserted wasteland, I made it a huge garbage dumping ground, polluted by the civilisation that lives within the

megastructure. So I paint a few bigger metallic structures, distant houses, even wind-powered electricity generators. All of this makes it a place where you could believe something lived, instead of just a barren land of rocks.



Photoshop FIRST SNOW

Learn to design and paint a female sci-fi character as **Marc Brunet** explains the process he used to create his awesome First Snow picture – from start to finish

Artist PROFILE

Marc Brunet
COUNTRY: Canada



Marc was a 3D animation student followed his dream and landed a plum job as a concept artist at Blizzard Entertainment. He believes that to become a good artist requires hours of practice, so he draws most of the time.

<http://ifxm.ag/marc-b>

GET YOUR RESOURCES

See page 226 now!

During this workshop you'll be walked through the process of creating this charming lady. My goal in this article is to help you pick up a few tips and learn something new that will help you improve your art in some way.

First of all, when I'm being tasked with creating a female character for a sci-fi scene, I start by asking myself what would represent this theme best. I really like the idea of mixing different elements in my pieces – it's always interesting to have various opposites in an image. For this project, I thought mixing a fairy tale with futuristic devices would give an interesting result. I chose Little Red Riding Hood as a basic idea to begin working from. I usually start with only that much information so I can

develop further as I progress, I find it to be a more entertaining process that way.

You'll need a good understanding of Photoshop and a pressure sensitive tablet. You should also have an understanding of the human anatomy, colours and textures before attempting this workshop.

Also, I like to use a variety of materials and fabrics, so knowing how to create custom brushes is definitely a plus for good texturing results.



1 Sketching

I don't always start a piece with a sketch, but in this case I want to get the design of the armour out on paper as soon as possible – it just goes faster if most of the design can be done at this stage. I'm painting on a canvas that's 3,400x4,800 pixels in size, using a custom brush I created that tries to mimic traditional pencils. I'm not concerned about the colouring yet, as the sketch is for composition purposes more than anything else.

2 Basic lighting

Now that I'm satisfied with my sketch, I proceed by sloppily applying colours to give me an idea of the Colour palette I'll be using. I also set up the light directions at this point.

Next, I apply the colours over my sketch so that I have a total of two layers for this project. You can add more if you feel uncomfortable, but I like to keep it simple: one for the background and one for the character. As a side note I'll be using a simple round brush with 25 per cent spacing and Shape Dynamics turned off in the Brushes Presets tab for most of this workshop.



3 Mood

I now set up the light sources. One will be coming from the right (the sun) and the other will be a subtle backlight coming from the left, to help separate the silhouette from the dark background. A warm primary colour and a cold secondary colour always work. I want a slightly desaturated look overall, keeping the saturated pink hair as a focal point. I also add a few brushstrokes to the background. ➡



4 First detailing

This is the fun part. I always enjoy starting with the face – if I think the girl is cute enough, it'll get me going! When I start detailing my image I try not to concentrate too much on one spot, but rather sculpt the whole image little by little. It gives you a better feel of the image as you progress and it's just more entertaining. It's easy to get bored with a piece, especially when you know you have to spend a dozen hours on it, so enjoying it by working on different areas constantly is important. Here the face is still pretty rough but you can see where it's heading.

5 Colour alteration

At this point I'm not too sure about the whole colour scheme. She has too much yellow in her skin, and it looks as if she's sick. I add more blue in my colours using the Colour Balance tool and it already looks better. Yellow tones tend to make the image depressing and I want to go for a livelier feel. Adding orange-peachy tones in her skin helps get rid of her sick look. I'd like to give the impression that the wind is blowing a cold breeze, but right now there's something wrong with the colours I've used for her cloak and umbrella.

6 Composition tweak

All right, this is much better! I remove the umbrella and it really helps the whole composition breath a little. Now it's obvious she's outside, in some kind of ruined city. I've tried making the cape red, but I'm not too sure this was a good choice composition-wise. It draws the attention away from her face and has

PRO SECRETS

Custom brushes

Photoshop is a very powerful application that enables you to create your own brushes. Learning how to create different custom brushes can save you an incredible amount of time, and can give you the possibility to render really interesting textures in a single brushstroke. I always end up creating one or two with each new painting to meet my needs for different textures.



the eyes of the viewer wandering all over the image. It's okay to try to change elements in the picture to see what could work best, but be sure to save before you do any big changes in case you want to revert back to your previous version. In my case, I won't roll back. It's still early in the process and it's no big deal to just change the cape's colour at this point.



7 The dress, part 1

The folds in her dress are the tricky part. Painting fabric is no easy task and it takes practice and observation to get it right without references. I'm far from being a master at painting fabrics, but I always try to incorporate a piece of cloth in all of my drawings – this way, I keep practising and improving. For this dress I paint folds randomly using my restricted understanding of how it works. I would use a reference but the result coming out of it is satisfying enough for me as it is. What you do is set yourself attach points where the folds will start from, then, following those folds, you make them interact with other folds coming from other attach points. That's how I do it and it seems to work decently.

8 Metal texture

When painting metal you need to consider all the light sources, since it's a reflective material. I decide to use textured metal for her armour. I just think it looks cooler than flawless sheets of metal. The Colour palette for the metal is important here. Even though it reflects its environment, it's more appealing to the eye to throw in a bunch of other random colours. Seen at full resolution it'll look strange and sketchy, but from a distance it adds to the richness of the piece. Simply using different shades of grey isn't interesting. For texturing the metal I use a smaller brush and apply short strokes.

9 The head

Since I want the head to be the focal point it really has to be looking good, but it's been bugging me since the beginning. I figure I should change the design a bit, and have her hair swirl in the wind to match her cloak. I also change the point she's looking at. She'll be looking at her left hand with a surprised expression. For her hair, I use the same round brush but with the Shape Dynamics option on, so the size of the brush varies with pressure.

10 Flipping

One very important tool that you should use as much as possible is the Rotate Canvas Horizontally tool. It gives you a whole new perspective on your drawing and a new critical eye. You'll probably see flaws you didn't notice before. I tend to use it every hour at least. Sometimes you might even want to leave the final piece flipped if it works better!





11 The belly

Her belly is yet another tricky part because I have to keep in mind the human anatomy while still giving it a style to match her proportions. It's probably one of the easiest parts to mess up, since the smallest error anatomy-wise will show up right away. You have to consider the rib cage, the muscles and where the skin will fold in the given position. I also give it a slight backlight to give better hints of the shape.

12 The dress, part 2

While still keeping the same fold design I started with, I'm changing the fabric of the dress from cotton to polyester. It's just more appropriate for a dress! The difference is subtle, but what I do is darken the dress using only the Lasso tool, then go over all the folds, adding hints of blue here and there. The big difference between those two fabrics is the specular – the way light reflects on it. For polyester the shadows will be darker and the light reflection stronger, hence a brighter specular.



PRO SECRETS

Custom keyboard shortcut

Adapting your shortcuts to your needs is a great way to save time and enhance your workflow. I set [C] and [V] to decrease and increase brush size. They're close to other keyboard shortcuts I use all the time: the spacebar, which I use to move around the image and the Color Picker (Alt/Option).



13 The cloak

Because her cloak is made of thin leather, the texturing is important. For the holes, I simply erase using a custom brush. I try to give it a dirty look, so holes are good! I start by creating smooth folds with a big round brush. Once satisfied, I consider the lights, adding some white where the light reflecting from the dress would hit the cloak. It plays the role of a second light source in this case, since it's so bright. I then take a smaller brush, and using the same technique I used on the metal I apply short strokes all over.

14 Fast background

As I mentioned earlier, I work on another layer for the background. I want to create a ruined cityscape to match the sci-fi theme. Since most of the attention will be drawn to the character, I don't want to spend too much time on this. I start with the big elements, like the shape of the buildings, and create a bunch of rectangles. Then I zoom in, add details and so on until it looks like it's far away in the background. I also give it a subtle blue tint to create an atmospheric perspective.

15 Greys

Greys can add a lot to a piece, but they can also be a nightmare. When I colour pick from surrounding colours, it tends to desaturate the piece over time. When you colour with a lighter colour on a darker one, for instance, the resulting blend will be less saturated than the two original colours. If you then pick from this colour and repeat, you end up killing all the intensity in your tones. The only way to avoid this problem is to manually select the colours you want to use.



16 Further detailing

With most of the big components done, now is the perfect time to detail and sharpen the piece even further. I zoom in on the image at 100 per cent and scout the entire picture, making sure all the edges are straight where they need to be, adding little flaws in the armour, like scratches and bumps, blending the colours to get rid of the sketchy and sloppy look, and finishing her hand at last. I also place snow flakes carefully around the image to add to the ambience.

17 Final adjustments

At this point the image is pretty much done. I push the detailing even further until I'm satisfied with the result. I save as a TIF, close the PSD I was working on and make the final adjustments on the TIF. All I need to do now is bring up the Color Balance tool and change the intensity of blue and yellow to give it a cooler feel – it's snowing, after all. ●



Photoshop

IT CAME FROM BEYOND SPACE

Girls in shiny catsuits, square-jawed heroes, tentacled monsters... **Aly Fell** reveals how pulp sci-fi has it all ➡





Artist PROFILE

Aly Fell

COUNTRY: England



Aly Fell is a 3D artist and modeller from Derbyshire. He's a

character art specialist, and has worked on gems like Count Duckula, Dangermouse, Avenger Penguins and Discworld. www.darkrising.co.uk



GET YOUR RESOURCES

See page 226 now!

Something I love in character art is personality. A raised eyebrow, sly grin or sideways glance can speak volumes and draw you in where blank intensity can leave you cold. Even if the world that the artist depicts is unreal and fantastical, a knowing glance can involve you, the viewer, in the unreality. I hope that most of the characters I draw have personality – a knowing quality in the same way that Sid James in a Carry On film would look to the camera and suddenly be speaking directly at you. It makes you involved.

1 Sketching it out

As the image is for a cover for ImagineFX magazine, it has to be a wrap around. Emails to the art editor provide me with the template, so I know the compositional layout that I have to work to. Essentially it's double a single page. I sketch up a few versions, changing the pose, and a final is decided upon.



2 Deciding an approach

I usually start with a line drawing. In this case, I try a technique that I've rarely used, which is to paint in greyscale first and then apply colour on top of it using Overlay, Multiply and Colour Mode painting options in Photoshop. I first lay down a simple mid-tone underneath the sketch, which is on a separate layer.

Then, on a new layer over the sketch, I start to paint in tone, as I would in colour. I always start with the face, the eyes being the first brushstroke. As I'm working on the outfit, I get a new instruction. An earlier sketch fits better with the intended layout and the cover text. So it's back to a previous version. I actually preferred this one anyway.



Pulp fiction covers, particularly sci-fi ones, have little self-awareness in retrospect, but we can impose that on them ourselves if we provide them with some retrospective irony. Looking through any collection of 40s or 50s covers, it is amazing to see how seriously some of them take themselves, in much the same way that the sci-fi movies of the same period did.

There always had to be a morality tale there somewhere. But then, they were obviously different times with very different fears. Spaceships offered a

means of escape from the Cold War fears that dominated the news of the time, and yet it was often nuclear energy that powered these craft to the stars.

Barbarella changed a lot of that with its pop culture kitsch. What I would like to do here is to create a Barbarella-type character in a typical pulp fiction world – dramatic landscape, spaceships, toothy monsters and so on. My inspiration is going to be Barbarella, of course, Frank Frazetta and the wonderful covers of artists like Frank Kelly Freas. All in the wonder of Photoshop!

Shortcuts Hue/Saturation Ctrl+U

I find that this shortcut is extremely useful for all those little colour tweaks that you need to do



3 Cutting and pasting

As I was really happy with the face that I was producing for the first version of the image, I decide to cut it into the new version to save some time. A bit of tweaking with the Transform tool and I get it right. I also clean up the rough composite sketch I received back from ImagineFX on the same Photoshop level.

I decide not to follow the tonal path I was intending, and instead start applying body colour over the quick greys I have laid down. At this point I've essentially cut the image in half so I can work on just the front, making sure I have a back-up of the full composition. This cuts down on the work that Photoshop has to do and stops your computer being sluggish.

4 Working over tone

I'm a bit of a layer nut. I use them too much and keep attempting to cut down a bit – but if you've got 'em I think you should use 'em! I create a new layer and set the blending mode to Multiply.

The overall colour stipulated is orange, so I put down a basic orange. Using Multiply means that I can still see the line and tone underneath. It also provides a ground over which I can paint further.

I keep the girl separate. She's going to be blue. Realising that my layers are already starting to get untidy I put her working layers into a group in the Layer Box drop-down menu. This is a way of keeping your separate elements neat if you use a lot of layers.



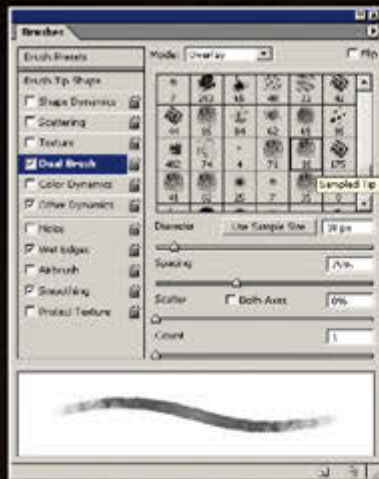
5 Painting body colour

I start on the spacesuit. There will be two major light sources in the image: a strong up-light from the front for dramatic effect, and a diffused, ambient light from behind. As the main light source is from below, I must take this into account. Bright light flattens form if projected from the front. So I use the hard line of my original sketch as the darkest element of shadow and paint up to and over it.

6 Getting on with it!

I now need to paint the girl. I don't use a lot of custom brushes in Photoshop, just a few each time I start an image. I like a simple, flat, round with Wet Edges checked, and a similar brush with a simple Dual Brush option for texture.

If I need something specific, I create it. For sketching out I use the Conte Pencil, which is a Photoshop brush, for a thick and thin result. It's quite naturalistic in its pencil feel. The look of the girl is very 60s, but also very now. For her skin, I use the flat, round brush. I'm not a huge fan of too much soft brush work, so I'll maybe just use it for a bit of occasional blending.

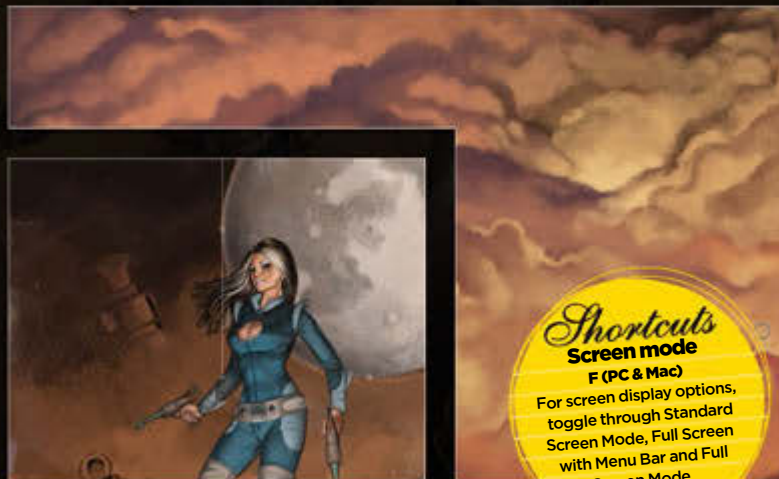


7 The moon and sky

I turn my attention to the moon, using ours as reference and trawling the internet for reference images. I paint it in a separate file in monotone, using the two simple brushes I described earlier. I save it and copy and paste the moon into my working file, and scale it to fit (Ctrl+T).

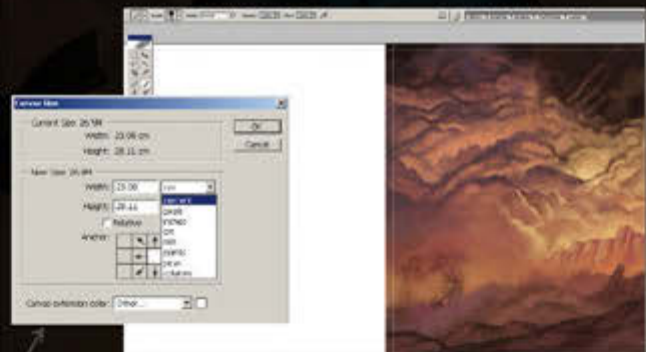
Now I look at the background. As the girl and the moon are on their own levels, I can hide them. Using the two brushes, I create a cloudy sky for an imposing, operatic feel, with some hidden light, and some cliffs as a compositional element.

The clouds are lit from underneath, so they will fade off from light to dark, with a secondary colour in the darkest areas.



8 Always check things out!

I check with the ImagineFX cover template. It's working fine but the moon pulls the viewer off to the right, so I reduce its size and start blending it with the clouds. Duplicating it onto another layer and playing with layer modes can produce some serendipitous results, so I do that here. In the end, I brighten one of the duplicated moons.



9 Adjust the Canvas Size

To increase canvas size you can use the Crop tool – great for making images bigger and smaller – or use the Canvas Size option, which is in the Image drop-down menu. I double the size, but extend it to take account of the spine as well. I then paste in the original sketch of the corny tentacled monster. Also, to give myself a base, colour wise, I paste under the sketch the artwork from the front page.

PRO SECRETS

Guides

Guides are important if working to layout specifications. Ctrl+ is a shortcut that switches the Guides on and off. You can create a new vertical or horizontal guide by displaying the rulers (Ctrl+R), placing a cursor over the ruler and dragging it down to the selected position. To further move the guide, hold your cursor over it, press Ctrl and move with the left mouse button.

Shortcuts

Screen mode

F (PC & Mac)

For screen display options, toggle through Standard Screen Mode, Full Screen with Menu Bar and Full Screen Mode.

PRO SECRETS

Saving files

Always save, that's the golden rule. It's so frustrating to lose something you're really happy with, and even more so to have someone tell you, "you should have saved!" The thing to do is to save as a new file intermittently.

Try to develop a numbering system that makes sense and is easy to remember, like Pulp Cover 01, Pulp Cover 02 and so on. Never call them Final, because the chances are it won't be, and then you end up with New Final, New Final 2.



10 Clouds, clouds, clouds!

I like clouds. Good job really, as there are lots to do here. Remember to treat them the same way as I did earlier. I cover up the entire duplicated half of the image with lots of clouds. As I'm not sure how I'm going to treat the monster, I just fill in space that I know may be obscured later.

It's also time to create the secondary characters that I obscured earlier with cloud. I decide upon a bearded baddie, with a slight feel of Doctor Who's arch nemesis The Master.

I also include a woman with a more retro haircut to fit in with the pulp feel of the whole thing. I then add highlights to the main girl's outfit and tidy up the hair and other details, like the guns.

11 Flatten those layers

As I use a lot of layers for all the elements in the image, it is wise to intermittently merge the ones you have finished working on. As I finish on the girl, I flatten her layers and reduce the working file size. This is very important when working on large images, as Photoshop is an application that likes to use a lot of your computer's resources.

Keeping working file sizes down just helps those 'it's all frozen-up' moments from occurring quite as often. If there is something that you feel like changing and it needs a layer that you flattened earlier, you can always paste into the working image from an earlier work-in-progress. Ensure that you're saving the work as a new file as you go along, and not just overwriting the first one!

12 Spaceships

A further item to balance out the composition and create a bit more narrative is a spacecraft. I'd roughed out a couple in my original sketch, so being inspired by Frazetta and The Trigan Empire, a silver dart felt appropriate. Painting it almost flat on I thought I might be able to duplicate it later and have a squadron attacking the monster. In the end I think this may look too obvious, but I'll decide later.

Shortcuts

Fit on screen
Ctrl+0 (PC)
Cmd+0 (Mac)

When constantly zooming in and out, getting an overview of the image is essential.

14 Final tweaks on the main character

I go back to the girl, and with a fine brush just touch up those little details and generally tweak until I'm happy.

It's at this point that it becomes difficult to let an image go. I start to question whether there is still something needed. Now it's time to walk away from it. Have a cup of tea and a biscuit. Put it down and come back to it in a bit. Any error will be much more apparent when looking at the image fresh.

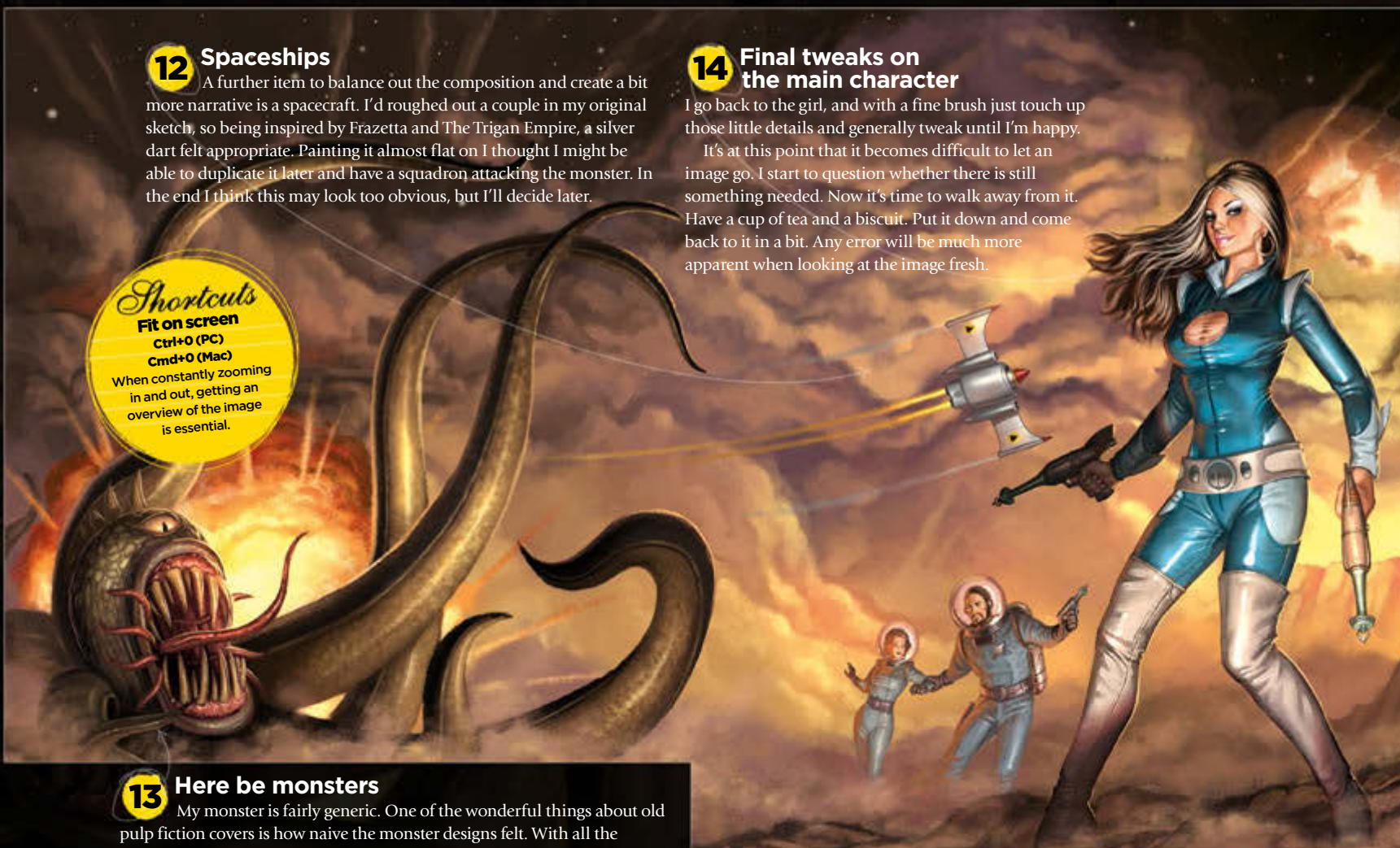
13 Here be monsters

My monster is fairly generic. One of the wonderful things about old pulp fiction covers is how naive the monster designs felt. With all the anatomically perfect, ultra-designed aliens we are accustomed to seeing in movies and on TV, it's rather nice to look at the old images and just say to yourself, "No way would that work!"

They were often just humans with insect or monster heads, a claw or a tentacle. Mine will be a space octopus with big pointy teeth. I paint him rising up out of the dust of the planet's surface, with the explosion from a spacecraft silhouetting him.

15 The end...?

I realised it needed lightening a bit, so I created a new layer over the final flattened image, set the layer mode to Color Dodge and filled it with black. Using a very soft brush with opacity down to 50 per cent and flow right down to 10 per cent, I select a soft pale yellow and gently brush it over the lighter areas of the background and areas that require added highlighting. Flatten it, make a final adjustment using the Photo Filter and the Brightness/Contrast settings, and it's done. ●



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Daryl Mandryk

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Daryl is a digital artist living in Vancouver, Canada. He's

a full-time freelance artist, after stints at Propaganda Games, Electronic Arts and Disney Interactive.

www.mandrykart.com

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See page 226 now!

Photoshop FROM CONCEPT TO CREATION

From start to finish: how to create fantastic images quickly from your imagination, by digital artist **Daryl Mandryk**

One question I often get asked is "do you have a process when you create a digital painting?" In this workshop, I'll show you the techniques that I use to start from scratch, begin to generate an idea, block in my painting, and then take it all the way to completion. To use these techniques well you should be proficient with Photoshop and preferably have access to a pressure-sensitive tablet like

a Wacom Intuos – any size, make or model will do.

This workshop will focus on the fundamentals required to produce a strong image – composition, values, design and rendering – and how to do it quickly. I find that there really is no substitute for having

these strong fundamentals – no amount of photo references or Photoshop filters in the world will save an image if it is composed badly or boring to look at. So, are you ready? Let's get started...

1 Throw something down

There are numerous ways to come up with ideas – some people like to do several thumbnails, some shoot reference photos. Often if the work is for a client, they will already have a strong idea in mind and you'll have plenty of direction. In this case however, I want to create something original and unique straight out of my head.

A common problem is that the blank page is very intimidating – so I get rid of it quickly just by laying in some big blobby shapes. I choose a big brush and just scribble away for a bit. I'm not interested in anything at this point except getting something down on the canvas as quickly as possible. I usually use a regular hard-edged brush for this, but feel free to

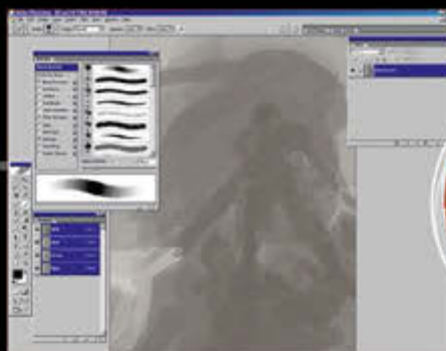
experiment with different brushes to find one you like. Sometimes you can get interesting results by mixing and matching different brush types.

2 Find your big shapes

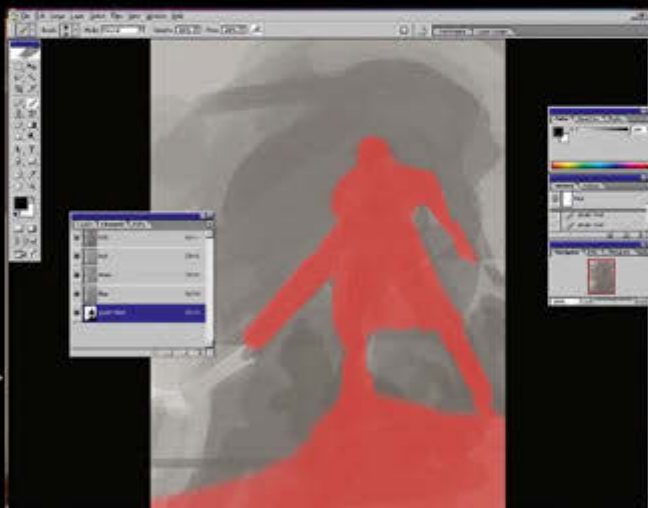
The main thing I am trying to do here is find some big abstract shapes that work well together in a pleasing and eye-catching composition. At this point I am just playing around, and seeing if anything sticks. This stage can actually be quite slow – sometimes ideas don't present themselves right away. You really have to take your time here and just relax and have fun. Eventually I start to see patterns emerge in the shapes that I'm creating – it's a bit like seeing shapes in the clouds. I am starting to picture a scene of a figure in the foreground and some kind of background element – possibly a mech. Notice that I'm not working with colour at this stage – it's too distracting. Using black and white lets you concentrate on value and shape – colour can come later.

3 Masking

When I start to get a good idea of where this image is going, I use layer masks to break the image up into its various elements. I hit [Q] to go into



Quick Mask mode and quickly create layer masks for three main scene elements – foreground, mid-ground, and background. Separating these elements, at least initially, makes it easy to tweak your composition and work on the silhouettes of your shapes.



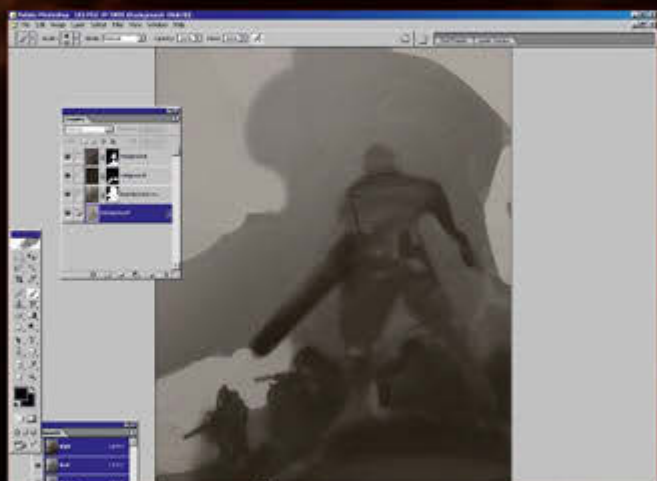


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PRO SECRETS

Experimenting

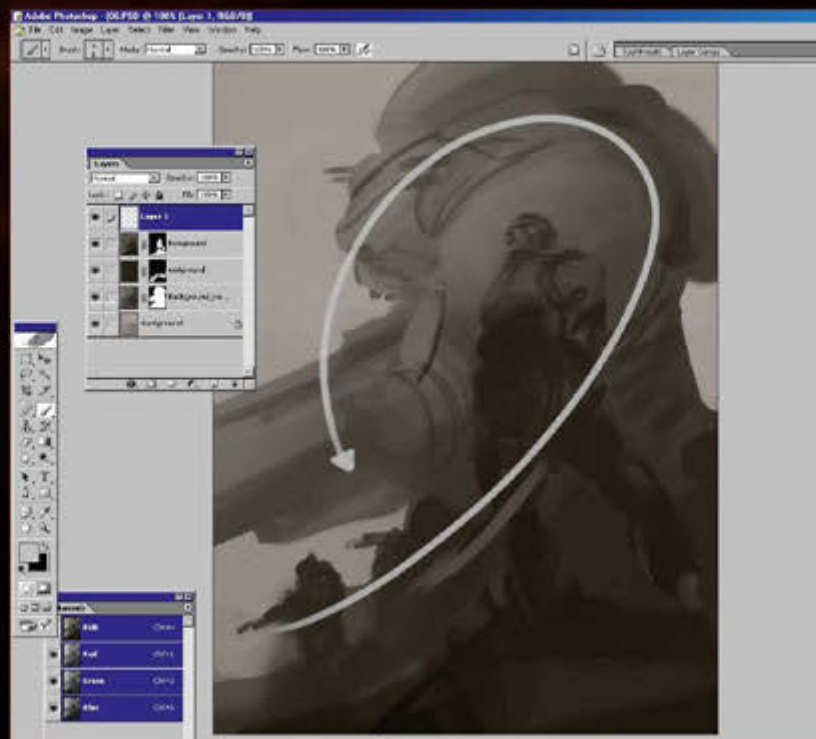
Feel like experimenting or pushing your painting in a new direction? Create a new layer and paint your changes onto it. Then you can toggle the visibility (the small eye beside the layer) off and on and decide if you really like the change or not. Keep the one you like best.

4 Interesting silhouettes

The silhouette can give the viewer a lot of information, so I try to make sure that I create interesting and unique silhouettes for the objects in my scene. Because the main elements are layer masked, I can paint freely within the layer without affecting the silhouette. If I want to change the silhouette, I select the mask channel next to the layer. White will cut away at the layer mask, black will add to it. This does give a bit of a cut-out look to my painting, but that will go away in later stages.

5 Broad strokes

Here I am just using a few broad strokes to help solidify my idea for the scene. I know I want a warrior-type figure in the foreground, a few soldiers in the mid-ground, and a big shape to tie it all together in the background. Note that I don't go into details at all, just a few suggestive strokes here and there to remind myself of where I want to take



things. I try to use the biggest brush I can get away with and resist the temptation to put in too much detail.

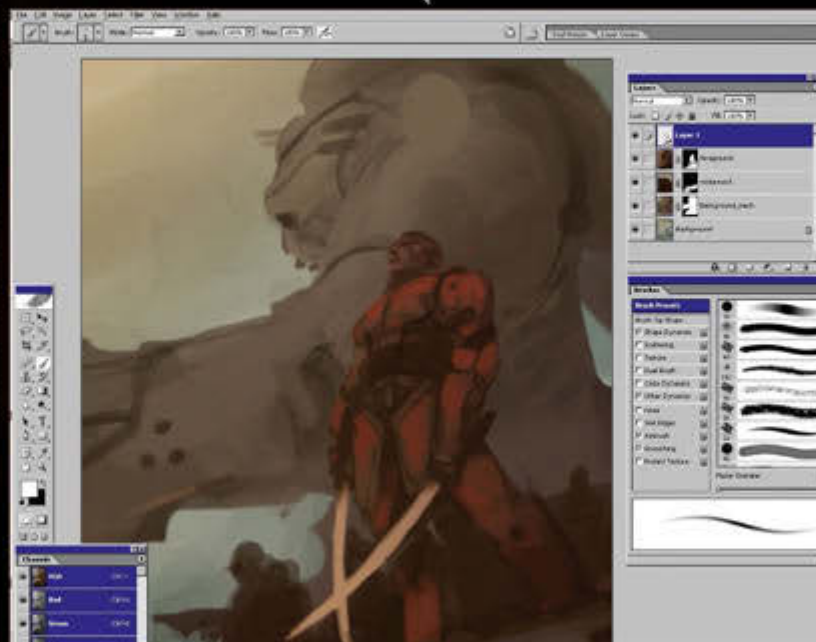
6 Eye flow

The key to a good composition is knowing how and where to direct the viewer's eye. You want the eye to flow through your painting, stopping to rest at interesting points, and then carrying on. In this way, the viewer sustains their interest in your work and finds it appealing. Notice how the eye sweeps up the sword, around the mech's back, then down to the soldiers in the mid-ground and finally back up the sword.

7 Establishing a quick palette

Up until now I've been painting very close to greyscale just to simplify things and make it easier to see my values. Now it's time to add some colour washes to my layers and throw down some really basic colours, just to get a sense of where I want to take this.

It's important to add colour quickly and start painting in colour as soon as possible to avoid the colourised look. This happens when there is no Hue/Saturation variation between highlights and shadows, and drains the realism from your paintings.



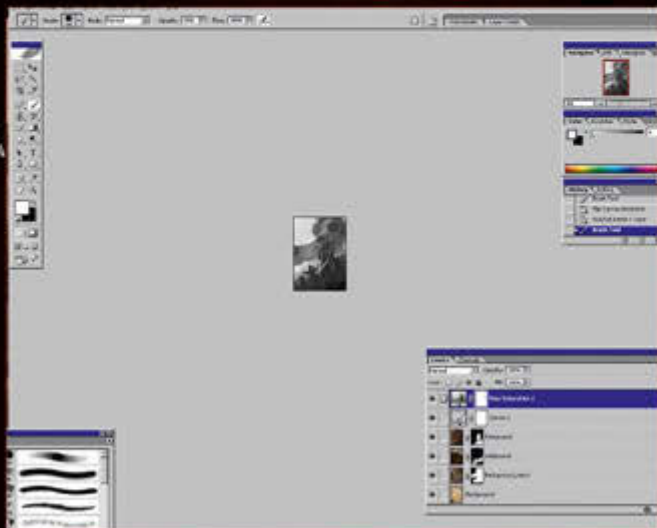


8 Adjustment Layers

Adjustment Layers are invaluable for being able to tweak the look of your painting. Here I use a Curves Adjustment Layer to give some more punch to my image. The great thing about Adjustment Layers is that they are attached to a Channel Mask, making it easy to erase parts of them, and only have them affect the things you want. I use this erasing out technique all the time – it's a massive time saver.

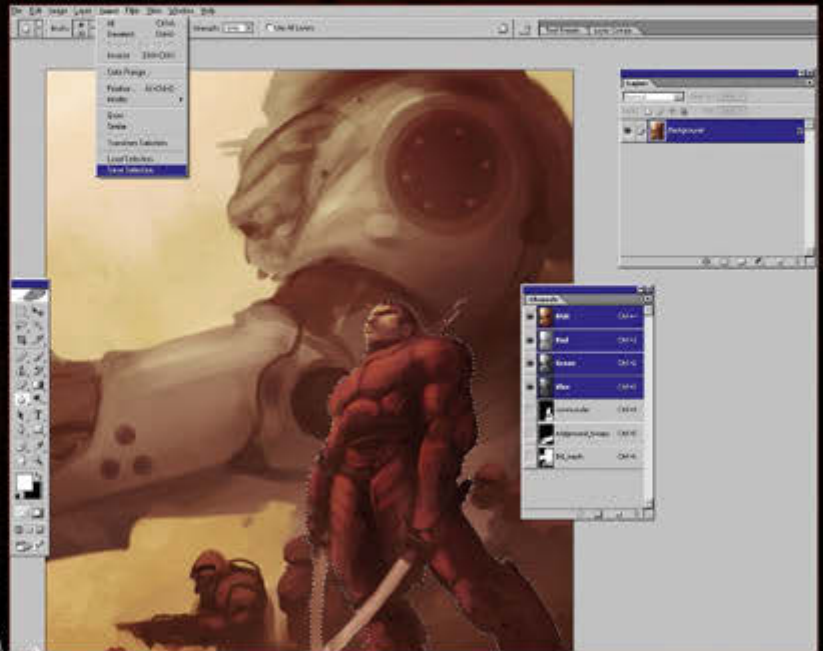
9 Thumbnail check

Now I perform a quick check to see how everything is coming together. I use an adjustment layer to take out all the colour of the image, and then zoom out to thumbnail size. If the image still reads from this distance and looks good compositionally, I know I'm on the right track. This is a step I repeat many times throughout my painting process.



Shortcuts Focus on painting

To really get immersed in your painting, use Tab to hide the User Interface, and hit [F] to go to full screen painting mode.



10 Time to commit

At this stage I'm happy with how the painting is going, and I've made all my composition decisions. It's time to get into the nitty-gritty of painting, but first I'm going to flatten the entire image. This serves as a milestone and tells me it's time to start sculpting out the forms. I still save my layer masks as selections (Select Save Selection), so that if need be, I can always quickly Ctrl>click the appropriate channel to act as a selection mask for me. This helps me keep my options open a bit, especially when you need paint behind objects in your scene.

11 Sculpting out forms using light

I use a sculptural approach to the painting, always thinking about carving silhouettes and building up forms. I also work on the whole painting at once, attacking areas of flatness, trying to give them more depth. The viewer's eye will read value change and depth, so I use a lot of play between darks and lights to get the forms to really pop off the page.

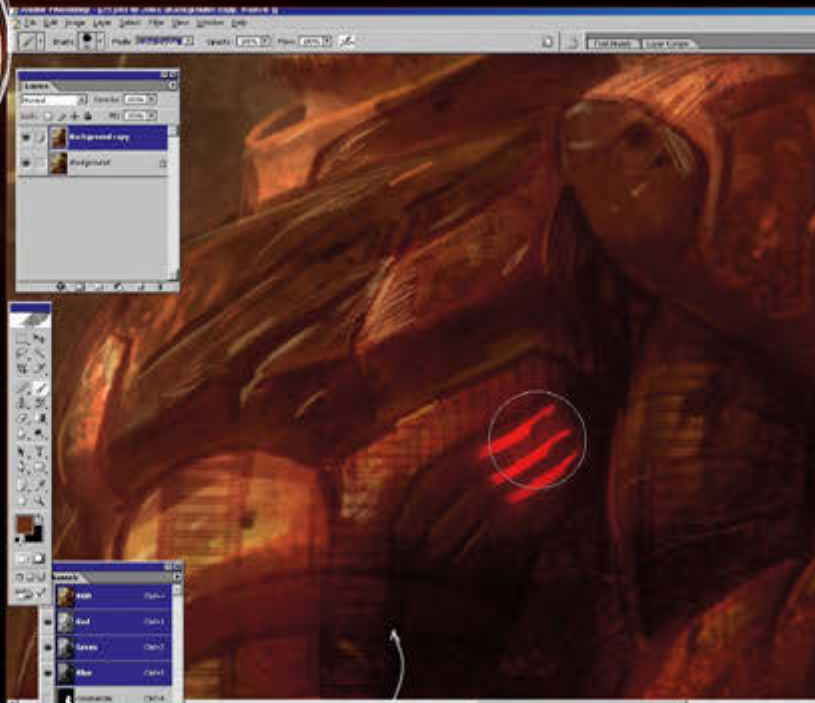
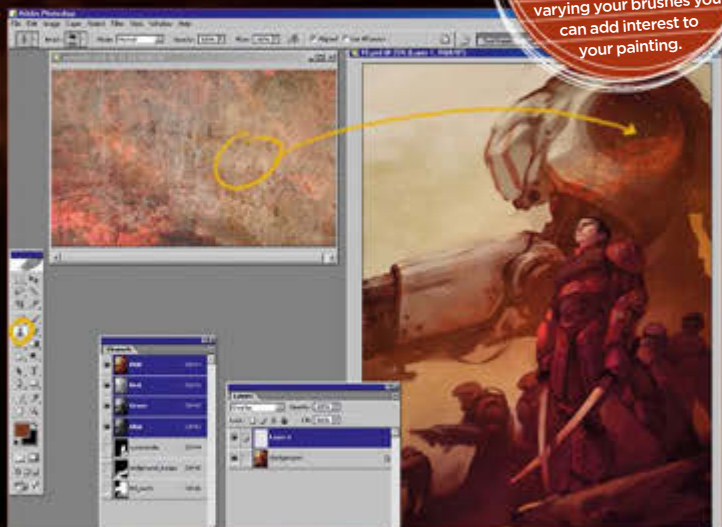
Once again, I paint using the biggest brush I can get away with, resisting adding details, and I always work from the broad to the specific.



Shortcuts

Harden your brush

Shift+[or] (PC & Mac)
Use this shortcut to make your brush harder or softer. By varying your brushes you can add interest to your painting.



PRO SECRETS

Look for errors

Flip your image both horizontally and vertically to check for drawing errors. I recommend making an action that automates this task for you.

12 Adding texture

Photo textures are a great way to add some grit and life to your image, and to break up areas that are looking too uniform. The key to using overlay textures effectively is knowing where and how to use them. Generally, if a surface is rough, you want a grittier-feeling texture to it, and for a smoother surface, the opposite. I load up a previously created texture and proceed to use the Rubber Stamp tool [S] to place the texture where needed. Once the overlay is complete, I flatten the image again and paint over the top of the overlayed texture.

I repeat this process of overlaying textures and then painting over the top of them over and over, until I feel the necessary depth and surface quality has been achieved.

13 Go for the details

The way I visualise adding details to a painting is like wiping away a blurry plastic sheet that covers the painting to reveal what is already there. Think of detailing as a tool to create interest in a certain area. If every area is detailed to the extreme, the painting becomes static and overwhelming. Conversely, a painting with too little detail will bore a viewer. My job as an artist is to find the happy medium.



14 Special FX

I usually leave any FX-type rendering until last. This might include things like gunfire, spells going off or lasers. In this case there are a few little red lights in the scene I'd like to give a glow to. I select the entire image, copy it and then paste it onto itself in a new layer. Now, setting my brush to Color Dodge I choose a dark reddish colour and then paint the areas around my lights. Painting with too bright a colour produces blown-out results, so it's best to choose something darker and less saturated. To control the opacity of the glow, either dust with the Eraser, or set the Layer Opacity lower, perhaps to 50 per cent.

15 Self-critiquing and finishing up

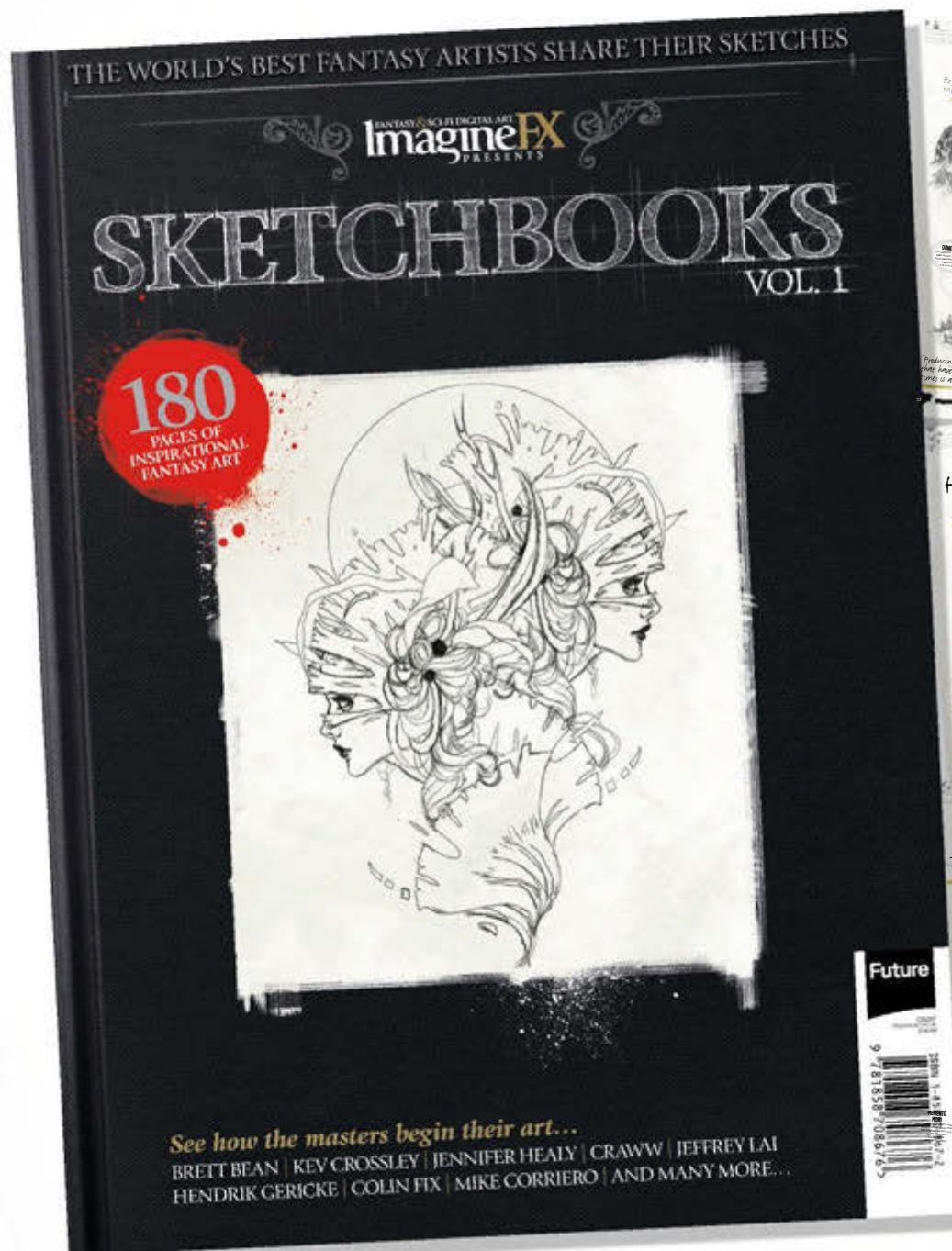
After staring at something for several hours it can be hard to be critical – so I'll leave the painting for a day and come back to look at it with fresh eyes. Usually something will jump out at me – in this case I notice the central character's blades feel a bit dull, so I add a bit of sheen to them and tighten them up.

At this point I call it done – it's now that I reflect on how the image was made, what I think worked, what I think didn't work, and take that learning into the next painting I do. Thanks for following along, and good luck creating your own fantasy images.



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Artist PROFILE

Loïc Zimmermann
COUNTRY: France



Loïc graduated with a masters degree in fine

art and has been a teacher, CG artist, lead artist, character modeller, artistic director and rendering supervisor. He is now freelance, mostly doing 3D characters, workshops, and he also undertakes a lot of personal works like illustrations, exhibitions, and books.

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GET YOUR RESOURCES

See page 226 now!

Loïc Zimmermann shares his unique image creation technique to show how he produces striking three-dimensional illustrations

Recently, I've been busy experimenting with a variety of art techniques to combine different sources and produce great 3D illustrations. Taking my inspiration from both the real world and the digital one, I usually start the over-paint process on a pre-textured 3D scene. I rarely go into high-end rendering, since it's a waste of time for illustration, choosing instead to focus more and more on modelling a detailed and funky scene with good, effective lighting. I'm using the same topology each time, which is obviously a very fast

way to get decent results (especially when you can share UVs and Rigs and all that kind of thing).

In this workshop, I'm going to share some of my personal favourite options for working with layers and making adjustments in Photoshop. I admit, this is a very personal approach, but I'll explain it as best I can. Hopefully this guide will encourage you to find your own individual method of working.

I'll split the workshop into a few key areas: importing sources (which can be CG or photographs), fixing rendering artefacts, tweaking the shapes and

adjusting skinning issues. Then I'll go on to look at enhancing the basic rendering with local contrasts, levels and increasing highlights and shadows. After that, I'll use a set of textures to create details to produce a more organic feel. I'll integrate my characters with a background, over-paint and finally look closely at colours.

The idea of the picture is a very classic girl 'n' guns thing. I did a lot of these in the old days, when I was still drawing. Anyway, I wanted this portrait to be cool and calm, with a touch of sci-fi and an efficient focusing point... Hopefully I succeeded. Let's see how this was made.

1 Cleaning the alpha

Open your CG render, which you'll find on the free disc, and load the alpha in order to put the characters on a layer. Name it Characters. When you render on a black background, the alpha is pre-multiplied with black. This means that when you load the alpha back in Photoshop, you end up with a slightly blurred outline. In compositing packages, it's really easy to get rid of it by specifying the colour of pre-multiplication. In Photoshop, I haven't found a way to do the same. So, load your selection, then go to Select>Modify>Contract and type 1. Create a mask. You can soften the selection before you create the mask (Select>Feather and type 1), or use the right mouse button with the Lasso tool or Rectangle selection activated.

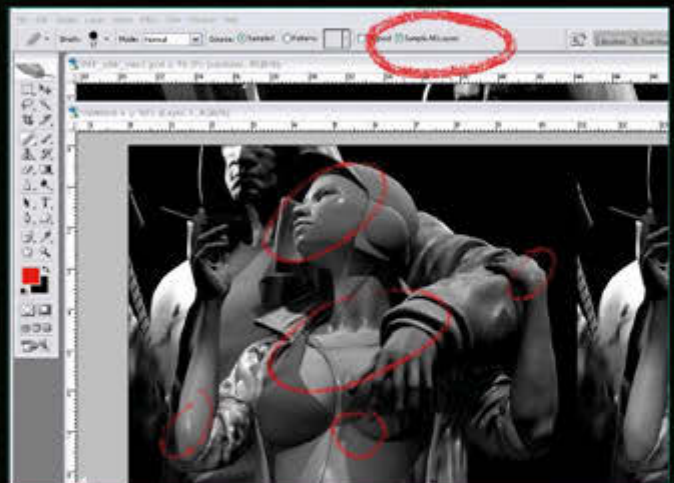
The render I'm using here is 4,000x4,000 pixels. Usually, I scale everything up to 5,000x5,000, and it's far better to do this at the start. When the picture is finished it gains some sharpness if it's been scaled down to an A4 300dpi.

2 Patches

Create a new layer on top and call it Patches. Always start by fixing any obvious problems with texture seams and so on. In this particular case, the head and body of the girl are two different geometries, so I sew them together and smooth things over. To correct that, use the Clone Stamp tool (S) and the Healing Brush tool (J). These two tools complement each other nicely. The Clone Stamp, as its name suggests, clones one area on to another, while the Healing Brush copies texture information from one area to blend it on to another area. The Healing Brush would, for example, be perfect to remove a blemish from an image of a celebrity, though the results will always be better if the underlying surface is neat already.

3 Small adjustments

Stamp things a bit to correct seams, and then use the Healing Brush to improve details. Both tools work with Alt/Option key to set the source. To work



on a different layer than the source, go to the source layer, Alt/Option+left click to pick the source, then go back to your working layer (Patches) and start cloning – or simply click on the Sample All Layers option on the top menu. When you're done, you can merge Characters with Patches.



element: a patch for the jacket, another one for the body, and so on. I turn the paper, choose another area of the picture and avoid repetitions.

7 Adjustment layers

It's time to start refining things a bit, so let's do so with some adjustment layers. Instead of painting on top, with regular colours, you use Levels (or Curves) to darken the things you want to, and lighten others. This is why the previous step was important. With all the noise we now have, there's a wider

4 2D Tweaking

Now it's time to start thinking about doing some tweaking. This is when you should start working with the Liquify function of Photoshop. Liquify enables you to deform the picture very softly and without too much loss by using a deformation mesh. Use it to push things, and correct shapes, proportions, curves and so on.

Select your Character layer, and go to Filter>Liquify. You can define a rectangle selection first to increase speed and control. Select a wider area than you need. There are a few different brush types on the left, so have a play around with them. I work with a lot of textures. Even if Liquify is pretty neat, it won't give its best results with a noisy picture. This is why I try to correct as many things as I can at this stage, before I start adding too much texture.

5 First paint over

Now you can start working on your highlights and shadows. This includes defining contours and adding primary details like seams, folds and soft wrinkles. To do this initial paint over, create some new layers. Use a basic brush that is set to a few pixels width (two or

three pixels maximum) with control over the opacity.

6 Starting to add texture

It's time to add some noise. I can't stand clean render and I need grain to grip on for really getting what I want for over-paint and colour work. Instead of using grain filters – even though they're pretty good – I tend to use organic textures as much as I can. I shoot macro pictures of some walls, canvas, paintings and the like to create a bank of textures. I use them with blending modes, to achieve noise, details and to add an organic touch. Right now, I only use three of my textures. One is a brown paper bag, turned into black and white, the second one is a piece of paper with folds, the third is a close-up of an abstract painting. I use them with Overlay or Soft Light blending mode on. The trick is that instead of using one giant texture on top of everything, I apply patches of paper on each separate



PRO SECRETS

Gaussian Blur

Instead of using feather on a selection, I prefer blurring the mask directly, to get exactly what I want. Select the mask and go to **Filter>Blur>Gaussian Blur**. With this in mind, you can then create an advanced selection, by selecting areas of the mask, add a feather set to a very smooth value, and blur more.

range of variations in our levels. They can hold a lot more information than in a clinical-looking CG ramp. Create a Levels adjustment layer (Layer>New Adjustment Layer>Levels or click the icon on the bottom of the Layer tab), and set it to Dark. Make a second one and set it to Bright. The levels that you use will be different for each picture. These screenshots are just here as an example. When you've done this, fill the mask with black, to hide the effect of the layer, and paint with the airbrush for soft highlights and shadows, or with a sharp brush for speculars and contours.



8 Clothing
When this is done, create a new set of layers to work with basic brushes and colours this time. I'm doing more work with the girl's clothing now, specifically focusing on the contour of the bra. You can add as many details as you like here, depending on what you want to achieve.



9 About the background
First create a couple of adjustment layers to finely tune the global lighting, and help with the integration of the characters into the background. Use gradients to mask those adjustments.

10 More details
Now it's time to add some more details in the background. In my case I've opted to use a digital photograph, taken without any flash, inside a church. This



PRO SECRETS

Liquify

You can save your deformations. This is really useful when you work on many layers and you don't want to merge them yet. In this case, you can select one of them, use Liquify, go to Save Mesh and give the deformation a name. Click OK to apply deformations. Then select the next layer, Liquify>Load Mesh. And magic! You have the same deformation. Have fun with this.

11 Colours and more

As a first step, I often use a global texture on top of everything to give an idea of some tones. Then I apply adjustment layers to finalise the colours. The texture I've gone for is a metallic plate with a lot of concentric scratches and cool colours. You can use whatever texture you want. Try to be neat at this stage. Make a sharp selection of every element – clothes, body, guns, cap – and create an adjustment layer for each.

12 Hues and Saturation

To colourise your image, use Hue/Saturation set to Colorise and play with the Hue slider to find some cool values. When you do this, expect to lose some of the highlights from the image. But don't worry, it's easy to fix.





blending options, you focus the effect of the layer where you want. Press Ctrl/Cmd+I and paint areas manually, with a soft airbrush set to white.

16 Old school ways

Finally, do more over-painting, add more textures, and more adjustment layers, until you're happy with the finished result. You'll no doubt find yourself skipping backward and forward through the steps, but I've mapped out the most important things, in my opinion. That's using very few tools and functions and applying old school ways that are open to intuition and experimentation. This is how I work.

13 Advanced blending options

On a regular layer you would simply double-click on the thumbnail and the menu would pop up. When you do the same on an adjustment layer, you go into its settings, which is good – but not what we want. So right click on the layer and select Blending Options.

The bottom slider enables you to fade your layer into the background, with the option to make this only happen where it's dark or bright on a specific range of your choosing. Here you can see I dragged the bright slider on the left, which means I recovered the highlights on the girl's skin. When you're happy with the result, drag the slider again with the Alt/Option key pressed. I use this function on 80 per cent of my layers.

14 Primary colours

Perform the previous step for every separate element in your image. Make sure you put some global colours on your picture. Because you're working with Adjustment Layers, you can quickly tune the colour to make them match. When it's done, group all those layers together (Ctrl/Cmd+G) and name this Primary Colours.

15 Secondary colours

Create some more subtle tones of colours with variation, not only for colours but levels too, as you did before. Use the advanced blending option to really work on specific areas. This way, for example, you can set a Color and Balance adjustment layer to cool highlights and mid-tones. Then with the



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"The deadly Malesquis are a prize trophy for those wishing to better their reputation and wealth"

John Kearney (page 84)



Creatures

The universe is a strange place, populated by a wide range of weird and wonderful creatures. Using these workshops you will be able to develop your monster design skills and workflow patterns.

Featured artists



John Kearney



Digital artist John Kearney loves monsters, and the world loves the monsters he creates. He lives

in England, and spent seven years working in the video games industry creating 3D models, before going freelance. His workshop introduces all the basics you need to attempt your own fabulous monstrosity.

www.voofostudios.com



Francis Tsai



Francis is a freelance illustrator and concept artist living in San Diego, and his

clients include Marvel and Wizards of the Coast. With a wicked sense of humour, Francis has chosen to create a retro feel to his comic book image that illustrates what would happen if aliens really did attack.

www.teamgt.com



Michael Kutsche



Michael is an award-winning German artist who is based in Berlin. He's a conceptual artist

and illustrator who has, since 1998, made his career in the VFX industry. He has worked on music videos and in animation too. Here, he paints a photorealist human/chimp hybrid, which you can see on page 94.

<http://michaelkutsche.com>



Andy Park



The California-based concept artist and illustrator shot to fame when he worked on the hit

video game God of War 2 and its sequel. But there are no Greek gods in Andy's workshop here. Instead, he demonstrates how to create a terrifying Martian from scratch, and the processes every concept artist uses.

www.andyparkart.com



Mike Corriero



Mike has worked in film and video games for a good many years, creating characters and

creatures. Here he shows how to use thumbnails to help create a creature design from abstract asymmetrical duplication. It's not as weird as it sounds, and the technique can be applied to many other areas of art.

www.mikecorriero.com

Photoshop MONSTER CREATIONS

The creation of John Kearney's Malesquis is an insight into the evolution of a beast



This article will provide you with a walkthrough of my experiences during the creation of this project. I hope that you pick up some useful tips and find it entertaining and informative.

First, I assess what is required and set a few targets. I'm being asked to paint a striking monster, which immediately gives me the main focus of the painting. My design has to be solid, unique, and convincing enough to clearly visualise

its movement. I want it to look stylish and be able to captivate the viewer's imaginations. Lastly, I want to place it in a setting of some peripheral interest and create a composition with visual impact. It's good to be ambitious! I realise that this is no easy task, and that preparation will aid in making my goals a reality. The first task is to come up with a scenario. Even a basic story will give a design purpose and direction. I normally scribble down some ideas that will be used

throughout the project as a source of inspiration and guidance.

My beast will be from a breed of alien creatures called The Malesquis. They can only be found on one planet, a barren and desolate place called Arrazine. This world is a hostile environment. It's a deadly battlefield for warriors and hunters brave, or stupid enough to enter its domain. The deadly Malesquis are thus a prize trophy for those wishing to better their reputation and wealth.



Artist PROFILE
John Kearney
COUNTRY: England

John has many years experience as a 3D graphic artist in the video games industry. He is currently freelancing on various projects.
www.voofostudios.com



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1 The Malesquis concept

I've been given landscape dimensions, which influences my decision to go with a quadruped rather than a biped. The monster has to be the main focus, and I feel a biped would have made the composition potentially problematic. Using my storyline, I'm able to get a feel for the kind of beast that would work well in a harsh habitat. I think the perfect mix would include armoured shells, mobile limbs for climbing rocks, an impressive arsenal of weapons for attack and a few vulnerabilities, indicating that adept warriors would be able to challenge them.

2 Gathering reference material for inspiration

I write a quick list of insects, animals and

anything else that might provide useful eye candy. Then I go about searching for some reference, both on the internet and in my book collection. I end up with a folder packed with numerous photographs. Included are scorpions, turtles, crabs, earwigs, wasps, rams and even seashells! Many thoughts begin to flood my mind, so I take advantage of them by knocking out some incredibly crude and rudimentary sketches. The purpose of this is to begin to get my ideas down on paper. I don't worry too much about the quality of my initial thumbnail sketches. They are just mental notes that are there to be built upon.

3 Selecting and developing a sketch

Usually I take quite a lot of time to develop



my chosen sketch. This time I feel impulsive and eager to get straight into Photoshop. I choose a thumbnail that is barely enough to start with, scan it in and get straight to work. I quickly create rough landscape dimensions for my canvas and then begin adding to the pencil sketch digitally. I know the pose has to be fairly strong and clear enough to show off the design, so I get stuck in with some basic, loose shapes. A rough impression of the caves is introduced so that the environment is indicated for compositional purposes. If ideas are flowing, it's usually a good idea to go with them and capitalise on the inspiration.

4 Canvas set-up

I carefully review the dynamics of the creature and think more about composition. I also make mental notes of places where I could add the hunters and then rotate, crop and scale the image to half of my intended final resolution. I do this for two reasons. I know that I will eventually refine and detail the whole picture once all the basics are in place – this is the stage where the resolution matters. Secondly, I want to use Photoshop quickly during my initial sketching. Once I reach a basic milestone, I begin to think about brushes that I might need during later stages.

Shortcuts
Straight lines
Shift+click (PC & Mac)
Have trouble drawing straight lines? Hold down Shift and click at the point where you want the line to end.
Et voila!



5 Brush management

Texture is always important to me. More often than not I prefer to manually draw a lot of it rather than use large brushes, as that can make things look linear and samey. You can define contour and shape much better with smaller brushes that are endowed with a hint of texture. One of my favourites that I use in a good 90 per cent of my work is the Pastel brush, which ships with Photoshop's Natural Media brushes. It gives me a bit of grain and a nice shape, which I personally prefer for painting. I supplement this with custom brushes that I have drawn myself, usually with pencil on paper. You get a lot of organic grain for free, and this makes things look very natural.

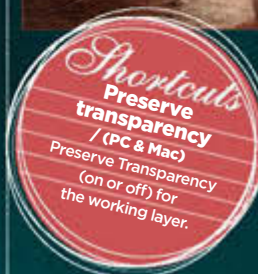
6 Colour and tonal foundations

I consider that tones, values, contrast and overall lighting generally take paramount importance. Colours can be changed incredibly easily when working digitally. As long as I am near the mark I don't

worry too much about having a palette laid out. With the knowledge that new light sources will be added at a later stage I proceed to paint some blue hues of differing brightness to give me a basic ambience and an underpainting on which to work. Doing this provides an effective starting point, because the fundamental tones of the image are set. I recommend getting rid of the white canvas as quickly as possible.

7 Lighting and colour

Lighting affects absolutely everything, so consider its colour and intensity very carefully when selecting and mixing surface colours. Think about the quality of light and the effect it will have on shadows. Light can be used to add areas of focus, add contrast, create atmosphere or describe form. Since my scene is going to be set in a dark cave I use the foreground hunter as a source of light via his weapon. This is planned and absolutely necessary, otherwise the beast's face will be in darkness.



8 Compositional enhancements

Stalactites and stalagmites provide ideal contrast points against the sky and foreground, which frame the picture and add more interest. While painting the ground, I try to incorporate natural patterns that will help lead the viewer's eye into the picture and create depth. Complementary light sources often add some colour interest. If placed correctly, they can also provide you with the ability to use rim lighting. This enables you to highlight one edge, a technique often used in film and photography for dramatic lighting. It's most striking when used in high contrast.



PRO SECRETS

Optimising keyboard shortcuts

I dislike using my Intuos touch strips and prefer keyboard shortcuts. I permanently have one hand on Ctrl+Z (Undo) because it often takes multiple tries before hitting the correct brushstroke. My most used shortcuts are dispersed around Ctrl+Z, and I find it an inconvenience using square brackets to change brush size. Therefore, I have remapped brush-size shortcuts from the square brackets to [Z] and [X] which means my eyes never have to leave the screen.



9 Improving weak areas and correcting mistakes

It's necessary to make some comments regarding the organic nature of painting fantasy artwork. Making critical decisions on the quality of your painting is vital every step of the way. Learning to critically assess your work is the first step in being able to point out problems and make corrections. Fantasy artwork is not like drawing a portrait. You have no real direct reference. As a result the painting has to be given a chance to evolve.

10 Character and detail considerations

I rarely make a proper design for character clothing in a painting like this, because the scale means that most of the detail is just suggestive. My initial foreground character pose isn't working too well, so I change it to something more dynamic. The revised character's feet are positioned to give the impression that they have slid, with bits of debris spewing up. The decorative cloak adds balance to his body position. It's important to plant the Malesquis' front legs into the ground and to add further dust and rubble around them. I make the landscape fairly inhospitable by adding sharp rocks and convey depth by drawing a few distance layers that gradually fade into the sky.



Shortcuts

Screen mode

F (PC & Mac)

For switching screen modes - a great way to save yourself time when working away on your picture.

PRO SECRETS

HSB Color palette

Colour selection is incredibly important when painting. Making sure you have the right brightness and hue can be time-consuming and frustrating, especially when using the default RGB Color Palette. Try changing it to the HSB Color Palette by left-clicking the small arrow at the top right of the Color Window. With a little practise you should find that colour selection becomes much more intuitive and accurate.



11 Complementary elements

I always try to think of things that will add decorative interest and be complementary to the look of the finished painting. What is complementary? It boils down to personal preference and artistic vision. This is where individuality shines through. I decide that crystal sparkles from the rocks would work well. Partially obscured light sources tend to create glow effects on camera lenses, so I decide to implement them at the back of the cave. Doing so gives the area a cinematic feel with a hint of mystery and atmosphere.

The area that has a rocky stepped pathway is one of curiosity and encourages the viewer's eye to roam around the picture. These little touches can add an awful lot to a painting.

12 Adjusting dull sections

If an area needs a bit of life or slight colour variation, I'll simply create a new layer, change it to Overlay or Hard Light, and hit this layer with hints of my desired colours using a soft-edged brush. This keeps the texture you have underneath, but changes the underlying colour, the intensity of it and adds vibrancy in the process. I use this sparingly.





13 It's bugging me!

If anything is catching my eye and annoying me then I feel compelled to change it. The horn crown feels a bit too clichéd and too similar to a Triceratops for my liking. This design doesn't work too well when I imagine the Malesquis brought to life. If placed in a film or game, the head movement would have looked severely restricted because of the horns clashing into the shell. It bugged me the whole time, so I decide to try an alternative near the very end. It occurs to me that the themed muscle tissue might work well as a neck and be consistent with

the design of the limbs and tails. The tissue suggests the neck can extend out, increasing its manoeuvrability and enabling Malesquis to quickly strike with a snap of its jaws. The result is a weirder design, similar to a tortoise, but definitely more threatening!

14 Adding effects and finishing touches

My custom brushes are used to create the debris, dust, and little sparkles. The debris/sparkle brush consists of noisy smudges and dots. I adjust the Scatter and Angle Jitter settings of the brush, so it's



sprayed randomly when painting. The dust is created with a brush that I have created myself. It's always nice to create your own unique brushes to solve a problem. As a final measure, I flatten the image and make colour corrections using Levels dialog. At this stage I sometimes like to hit the image with a few subtle glows in key places. I do this by creating a new layer, setting the layer mode to Color Dodge, and painting the blooms with a soft-edged brush.

15 Summary

It takes a great deal of time and effort to be able to put something down in a way that enables others to capture the essence of your idea or fantasy. You need to balance technical ability with creativity and be willing to suffer plenty of frustration in the process. Painting a picture is often a struggle against yourself, but the sense of achievement when you are finished is enough to make you go through it all over again.

Overall I think I manage to achieve quite a few of my goals with my picture of The Malesquis, so I am reasonably pleased with the result! I hope this article has inspired you, and has helped demonstrate a workflow for creating your own fantastical beasts from concept to completion. ■



Photoshop WHEN ALIENS ATTACK!

Francis Tsai uses the time-honoured theme of 'damsel in distress threatened by alien monster' to create a B-movie inspired illustration...

Artist PROFILE

Francis Tsai
COUNTRY: US



Francis is a freelance illustrator and concept designer living and working in Southern California.
www.teamgt.com

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One of my current side projects is a graphic novel science fiction story. One of its important components consists of the female protagonist's encounter with a frightening, gigantic alien creature. The subject matter clearly has its roots in the classic science fiction 'bug-eyed monster threatens space girl' scenario. The scene illustrated in this workshop is an updated take on that classic encounter, and was originally

intended to accompany a pitch package as well as serve as a potential cover illustration for the completed graphic novel. The bug-eyed monster concept is subverted a bit by eliminating the bug-eyed aspect in favour of a more horrific interpretation of a scary alien creature.

In terms of the illustration itself, my goal was to stylistically evoke the look and feel of the classic European sci-fi comics and blend that with some of the design sense of traditional American

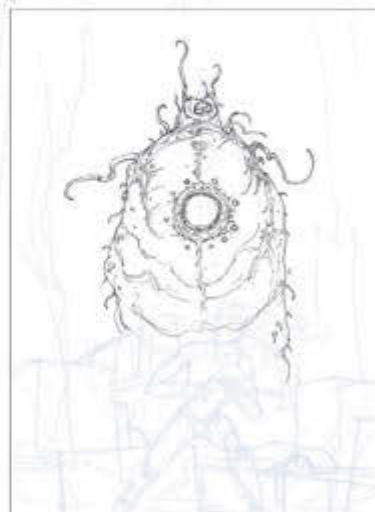
comics. In order to achieve this look, I decided to work through portions of the illustration as if it were being done with more traditional drawing media – blue pencil layout, inks, colours, and so on. However, I did break from that process a little bit on the odd occasion (as you might have guessed, I'm not really a purist – if it works, use it!) by using SketchUp to create a background environment. So follow these simple steps to see how I created the final horrific image...

1 Initial sketch and layout

Since this is intended to be the cover illustration for a comic book, I want the composition to be simple and clear so that the characters and situation are easily read at a glance. Boiling down the scenario to the essential components leaves me with the heroine, the creature and the environment. The proportions of the canvas suggest a vertical composition. Traditionally, a blue line sketch like this is done with a specific pencil colour called non-photo blue. As its name implies, this colour is not picked up by the cameras used to reproduce artwork created with traditional media. In this case, since we're not depending on traditional repro techniques the colour doesn't actually matter as long as you can easily distinguish it from the final line art colour in the inking stage.

2 Start inking

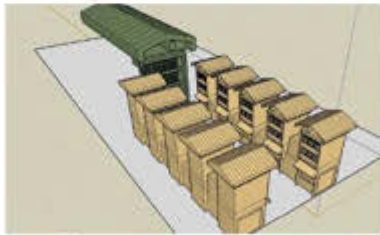
I'm using default Photoshop brushes, specifically the Hard Round brush, with Opacity set to vary with stylus pressure. In some cases, varying the line weight with stylus pressure (Shape Dynamics>Size Jitter) can add some interesting dynamics. For this illustration I want to simulate an inked-with-a-pen look, so I decide to use the first option.



3 Finalising the basic line drawing

The next step is to incorporate the SketchUp-generated environment and begin blocking in the colour. As a first step I paste in a medium-tone background – this sets a baseline value so I have the option of going either darker or lighter. At this point I need to stop and create the 3D environment asset.





4 Building the city

Once the drawing is laid in I can start thinking about the environment. I can get a pretty good approximation of the hand-drawn line art with SketchUp. One advantage SketchUp provides is being able to adjust the camera angles without having to redraw the buildings. Also, with many identical repeated elements in the architecture it's a lot more convenient to do in 3D. I need to show a modern outdoor urban environment, so I've created a small scale street scene. This scene is actually cobbled together from bits and pieces from other SketchUp projects I've done before. But I'm not too worried about the ground treatment, since it will be covered up by the characters and foreground stuff.



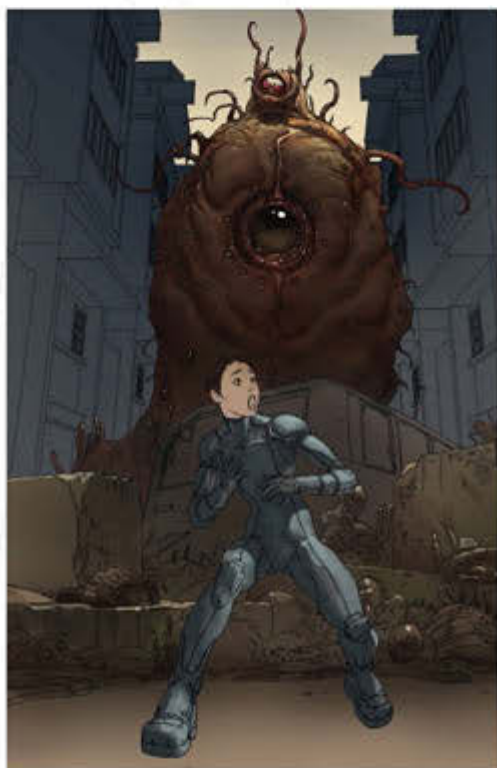
5 Choosing a camera angle

I've got a general idea for the background roughed in on the blueprint sketch. What I need compositionally is a one-point perspective camera angle, so that the lines of the architecture subliminally point towards the characters, reinforcing the focal point. Setting the camera near the ground and looking slightly upward at the buildings gives me the view I need. A useful SketchUp tool enables you to save scenes, including camera angles, so that you can go back to the same shot once you've made changes. I save this view. ➡



6 Assembling the pieces

The screenshot here shows the Hidden Line render (one of the output options from SketchUp) of the 3D model inserted into the artwork. Initially my strategy is to use just this 3D line art and then treat the entire image as a single line drawing. As you'll see later on however, I decide to take advantage of the shadow casting rendering option in SketchUp. Once the background has been incorporated into the drawing, I start blocking in the main areas of flat colour.



7 Rendering strategy

In this step I've started working on the rendering, indicating the main lighting setup. The early evening sky provides a nice opportunity to silhouette the head (or lack thereof) of the main baddie, and the gradual fade to darker shadows along his torso sets up another high contrast silhouette situation for the heroine's face. The gradient is reversed for the background architecture, indicating some bounce light near the ground and then fading upwards to maximise the figure-ground silhouette against the sky. The primary light source in the scene is directly overhead, lighting the upward-facing surfaces. She is looking off screen at some unseen threat, possibly unaware of the monster behind her. This is a bit of a cheat so that we can see the front of the monster as well as her reaction in the same shot. You'll notice I also employed the time-honoured technique of flipping the image to check for any weirdness.



PRO SECRETS

Create your own hotkeys

In Photoshop version CS and later, it's possible to change and create your own keyboard hotkeys. Go to Edit in the menu and choose Keyboard Shortcuts. Adding shortcut keystrokes to often-used tools and effects can speed up your workflow.

8 Dreamlike effect

One technique I sometimes use with line art involves combining a subtle Gaussian Blur effect with the original line art. This adds a sort of soft, dreamlike quality without sacrificing any of the detail of the original line art. This effect can add to the surreal quality in the painting. I make two different renders of the same scene in SketchUp – one lit, with flat colour and cast shadows and another using the simple, non-shadowed Hidden Line render. The line art render is added over the colour/shadowed render on Overlay or Multiply mode, and a Gaussian Blur filter is then applied to the line art. Make sure the two layers line up!



9 Refining the lighting

This is the stage where I decide to use the Cast Shadow rendering from SketchUp rather than the Hidden Line render. The lit version is a little more dramatic and adds a bit of dimension to the architecture. The main thing to remember here is to make sure the background/environment lighting matches that on the foreground and characters. SketchUp has the ability to accurately simulate daylighting conditions given a specific date, time and geographic location. This is probably a bit of overkill for our purposes, but the Shadow settings dialog box does enable you to compose the cast shadows to a certain extent. I render out this scene at a high resolution so that it holds up when it's pasted into the main illustration. (Creating high resolution output may require the Pro version of SketchUp.) In order to fit the environment rendering into the image's proportions, I have to transform the render, squishing it slightly side by side.

Shortcuts

Select all in layer
Ctrl/Cmd+Click (PC & Mac)
Hold Ctrl and click the layer thumbnail. The cursor will turn into a pointy finger with a dotted outline.



Shortcuts
Quick zoom
Ctrl/Cmd+Alt (PC & Mac)
To quickly zoom in and out, hold down Ctrl/Cmd+Alt and scroll the mouse wheel.

PRO SECRETS

Control texture effects

Using Overlay textures like the paper texture in this image can add a nice feel, but sometimes it interferes too much with specific areas of the painting. Use the Clone Stamp tool on the Texture Overlay layer to selectively emphasise or tone down the texture effects.



10 Headshot

One design detail that I want to portray as clearly as possible is the head of the alien monster. This creature started out as some sort of humanoid being with a recognizable head, and has since had its cranium scooped out. The open mouth allows the fleshy inner surface to be seen, and also the rear edge of the cranium can be seen against the sky through the open mouth. This is why I wanted to leave the sky in the background uncluttered.

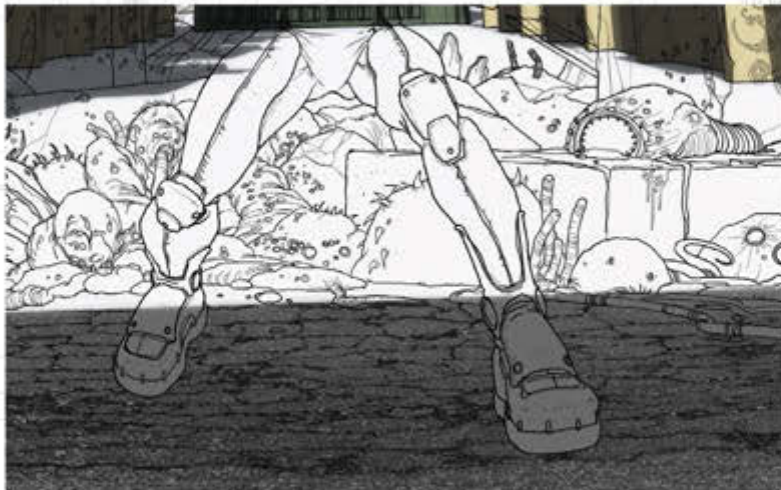
11 Expression

The piece is nearing finalisation, but as is often the case the final 10 per cent of a project can easily take 50 per cent or more of the total time and effort. I decide to focus on the main character's face – my original line art is a bit coarse, and although the intent is a cartoony look, I want to make sure the expression reads and that the audience can tell she is a young, high-school age girl. I paint over the line art here, modelling the face a bit more dimensionally and adding shade and cast shadow detail that wasn't present in the line art. This is probably the most important area of the painting – her face is silhouetted against the dark brown torso of the creature, forming an area of high contrast. Also the lines of the architecture in the background seem to converge on her face, reinforcing the idea.



13 Costume texture details

To add some visual interest to her costume I've shown a material/texture change in some areas. This is a pretty simple move, and is done by copying a portion of the layer containing the costume and running a monochromatic Gaussian Noise filter (Filter>Noise>Add Noise) on it, at less than two per cent. The layer containing the Noise version can also be adjusted for Opacity and Layer mode.



12 Ground texture details

I've overlaid an asphalt street texture on the ground under the main character on an Overlay layer. The asphalt image is compressed vertically to indicate the extreme foreshortening on the ground because of the low camera angle. The texture image is greyscale, and picks up the colour of the layers below.



14 The analogue feel

The final step here is to add one of my favourite textures over the entire image. This texture is a scan of a piece of yellow tracing paper that has been desaturated to a greyscale image. The contrast has been increased so that the fibres and irregularities in the paper are more visible. This image goes on the topmost layer, and I usually set the Layer mode to Overlay, although you should experiment with this to see if there are other modes you prefer. The screenshot shows the scanned paper layer prior to changing the layer mode to Overlay.



Painter & Photoshop PHOTOREALISTIC SCI-FI PORTRAITS

Michael Kutsche shows you how he created a human/chimp hybrid to illustrate his technique for painting life-like characters...

Artist PROFILE

Michael Kutsche

COUNTRY: Germany



Michael is an award-winning conceptual artist and

illustrator based in Berlin. Since 1998 he's worked in the VFX industry, where his experiences have ranged from direction to music video animation.

<http://ifxm.ag/mkutsche>

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Photorealism can be time consuming, especially when compared to other forms of illustration. However, photorealistic paintings are particularly good at making an outlandish concept into a believable design, and can be less time consuming than a full 3D render.

So, when I chose to paint a human/chimp hybrid astronaut, I picked a photorealistic style to make it believable. My concept could easily look too far out

without implications of flesh, skin and bones to ground it in reality.

When you start a photoreal portrait of a fictitious character, the most important thing is to take your time and find some suitable references that fit your vision. The challenge is to only use a bit of each of the references you look at and create a unique idea from their combinations.

While it's good practice to do lots of speed-painting, sometimes you should take the time to carefully finish your

artwork. It's good to learn the full production process. I've seen artists out there who are able to create amazing speed-paintings, but fall down when it comes to defining the forms and features of a character or landscape.

To go the full, painstaking way without losing the natural feel of the initial sketch is the real challenge, and I know only a few artists who are capable of this consistently. It's my hope that this workshop will help you join them.



1 Start big

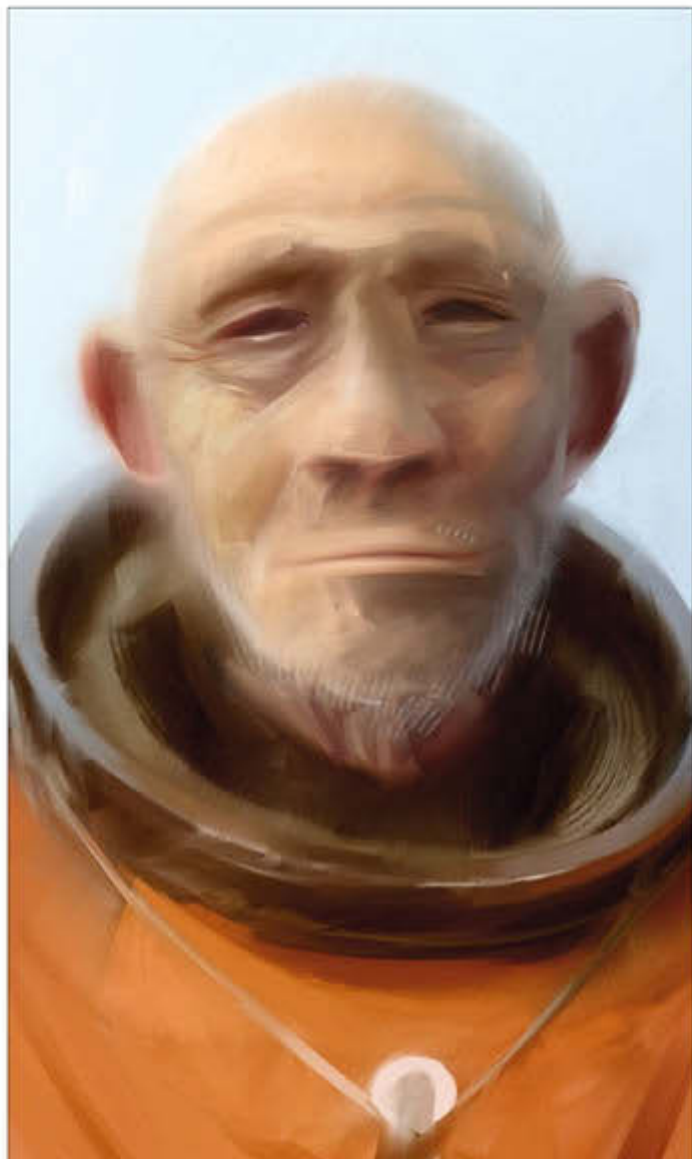
First up, I collect my references. In this case I got hold of loads of photos of old men, chimps and spacesuits. After drawing inspiration, the next thing to do is decide what kind of lighting to use, since it's this starting point that I'll build the whole image around.

Then I begin to find the right proportions and composition by roughly blocking in the main shapes and colours with big brushes and strokes. I don't bother much with the details here as it's always hard to paint over them later if they took a long time to create. I tend to use the brushes in Painter with colour-blending abilities for my roughs. The Chunky Oil Pastel brush, Loaded Palette knife and Wet Detail brush from the Acrylics family are all great tools for capturing life at the early stages of a painting.

2 Skin colour

After choosing a background colour, I define a shape for the silhouette with some fast strokes. Next, I focus on getting the skin colours and the rough colour of the spacesuit right. I add some red to the skin colour for the ears and take notice of the reflective material of the suit's aperture ring. Both the head and the background should reflect on its upper side, which is important to bear in mind for the detail stages later. For now I simply block in a few tones and move on.

Next I add some rough strokes for the folds of the suit, looking at the references to get a feel of how the fabric behaves. You should only start with more detailed strokes after you've had a look at the layout in a thumbnail and said to yourself – Yes, this is the right composition, proportions, and so on.



PRO SECRETS

Blending in Painter

Colour blending isn't limited to Photoshop layers and brushes. You can recreate the same effect using Painter's brushes by going to the Brush Controls, then selecting General > Buildup. Bear in mind this only works for certain brush types and will always result in a darker colour unless painting over white.

3 Loose definition of the face

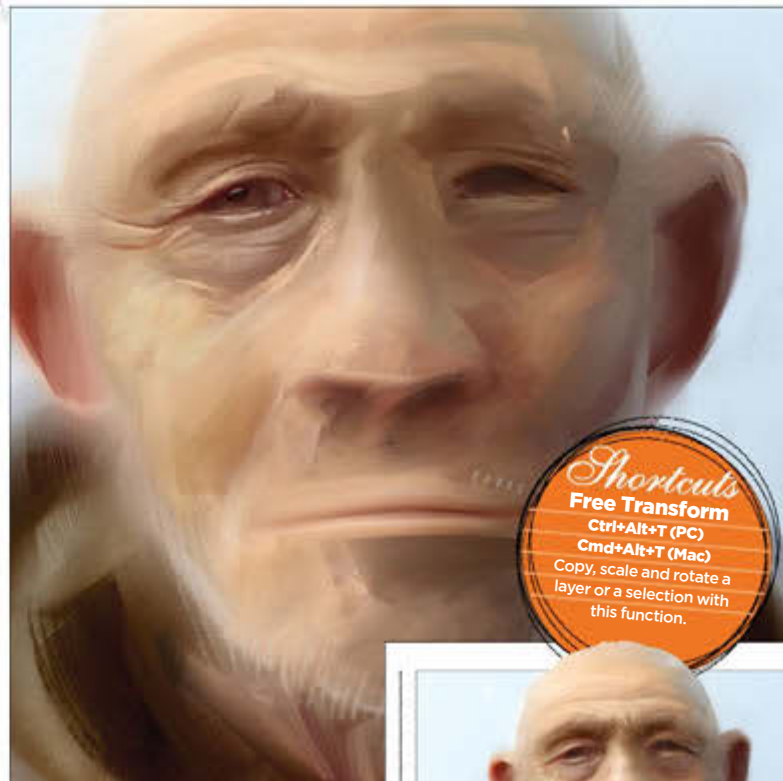
Now I'm happy with the overall composition, I start to work with smaller brushes, adding definition to my rough. I begin to define the position of the character's facial features and, being careful with my brush strokes, I paint dark spots for the eyes and the shadow under the nose. I decide this is a good time to experiment with expression, so I try out shapes and positions for the eyes and mouth on different layers, keeping the versions I like best.

When painting facial details, always bear in mind the direction and strength of the light. Be especially aware of how light falls on skin around the nose and ears, and how the colour temperature changes in shadowed areas.

Once the features are loosely defined, I do some rough strokes to create the beard. Remember that white hair in shadow still appears bright and reflects the ambient colour – in this case the pale background.

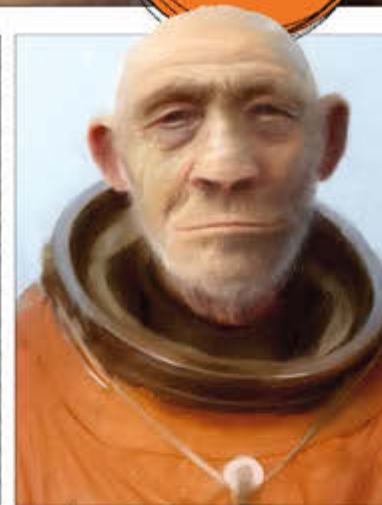
4 Adding more detail

With all the forms defined I can now go on to detailing. When it comes to portraits the main area of interest is likely to be the eyes, so they seem a good place to start the detail work. I choose one of the brushes mentioned in the first step and, using a small brush size, paint the eyelids and pupil. I add highlights on the wet parts around the eyeball where the water catches the light. Using reds I paint some defined wrinkles around the eye, particularly at the border between the eyeball and eyelids. I also notice that the eyelid throws a small shadow on the eyeball and paint that in, too. Try to give the wrinkles an organic form, to prevent them from looking too stylised or cartoony.



5 More definition

With the focal point captured, I add more detail to the face. I try to work on different areas simultaneously to keep the features of the character well-balanced. Beware of getting lost in the small details in just one area, because this could lend a disjointed feel to the image. I find facial expressions particularly challenging when creating a believable character, as it can be difficult to capture how the different parts of the face influence each other. A realistic smiling face is not achieved by drawing curved lips – the eyes, cheeks and nose are performing the smile movements, too.



6 The space suit

Next I draw some careful strokes to define the small folds of the fabric of the space suit. I also add in seams, attempting to do this with a natural flow. While looking at my reference images, I notice that some materials, like the orange fabric, have no grey/black shadows because of their translucence – instead their shadows are a saturated, dark orange. The blue sky also reflects on areas of the suit because of its sheen, which makes the orange appear desaturated. It's a subtle effect to try and capture, but these nuances really add vitality to the image.

7 The beard

With a soft tipped brush, draw some branches of white hair to define the beard. When drawing hair, it's a good idea not to start by drawing single hairs. Instead it's better to split the hair into strands by using a broad brush with a soft tip. After defining the flow and lighting of these strands it's easy to add in small strokes, creating texture and the illusion of thousands of hairs.

8 Adding more details

For the ape look I add in wrinkles around the mouth. The seams of fabric often crumple, so I add some small lighter and darker orange brushstrokes on the fabric to achieve this effect. There should be differences in the spacing between the strokes, otherwise it looks artificial.

9 Single beard hairs

Use a brush with a hard tip to paint the single hairs of the beard. Steer away from automating this step, because no single hair should look like any other to achieve a truly realistic effect.

I recommend the use of a Pastel brush on a grainy paper with low contrast, which I think gives each hair a suitably messy and organic look.

PRO SECRETS

Make textured papers

Instead of the time-consuming process of applying texture layers in Photoshop, you can build up an archive of skin, fabric, stone textures and the like, then import them as papers in Painter. To apply these textures to your paintings, just use the Add Grain brush.



12 Skin textures

I decide to add some skin textures to the face to achieve more realism. For this step I took some high-resolution photos of skin, applied a High Pass filter in Photoshop and used the result as a new layer with an Overlay blending mode. When taking photos of skin, I always use a soft lighting set-up, which produces even tones. This gives a skin texture that you can use in any artwork without worrying about different lighting situations. Don't apply the same texture over the whole face, as each part of the body is uniquely textured.



10 Refining the character

This may be the most time-consuming process, because I now have to take care of every little detail. A good foundation, which I've laid down in the previous steps, is of great use here. But I don't draw every detail of the image with the same level of sharpness: the sharpness of edges should vary, depending on the characteristics of the different materials and, of course, the camera's lens.

11 Add some textures

To give the suit a used look which fits better with the concept, I start to add some texture layers. First, I take ink, a brush and some textured papers and create swatches with real dirt spots. Then I scan the ones I like the most, put them in a layer set to Multiply and carefully arrange them over the suit. In a new texture layer, set to Overlay mode, I try to give the fabric a structure, again carefully arranging my textures. Finally, using the Loaded Palette knife I add some strands of hair to the traveller's bald head.

13 Tweaking in Photoshop

Under Layer>New Adjustment Layer select levels, shift the three arrows to refine the contrasts of the image. You can also use the Sharpen tool to add crispness to several areas. Adjustment Layers are good for preserving the older version of your artwork in case you change your mind. You can also use a Layer Mask for adding an effect to areas which require particular attention.

Photoshop QUICK MARTIAN CONCEPTS

Artist PROFILE

Andy Park
COUNTRY: US



Andy is a concept artist and illustrator who's worked on a variety of comic books, magazines, and TV shows. In recent years he's worked as a video game concept artist for Sony, creating art for the acclaimed God of War games.

www.andyparkart.com



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See page 226 now!

Concept artist **Andy Park** explains his tried and tested technique for developing a character in Photoshop

When illustrating a character or creature, the approach I take will vary depending on many factors like who I'm doing it for (be it a client or myself), what I'm trying to communicate, the time I need to do it in, what effect I'm going for and even what mood I'm in.

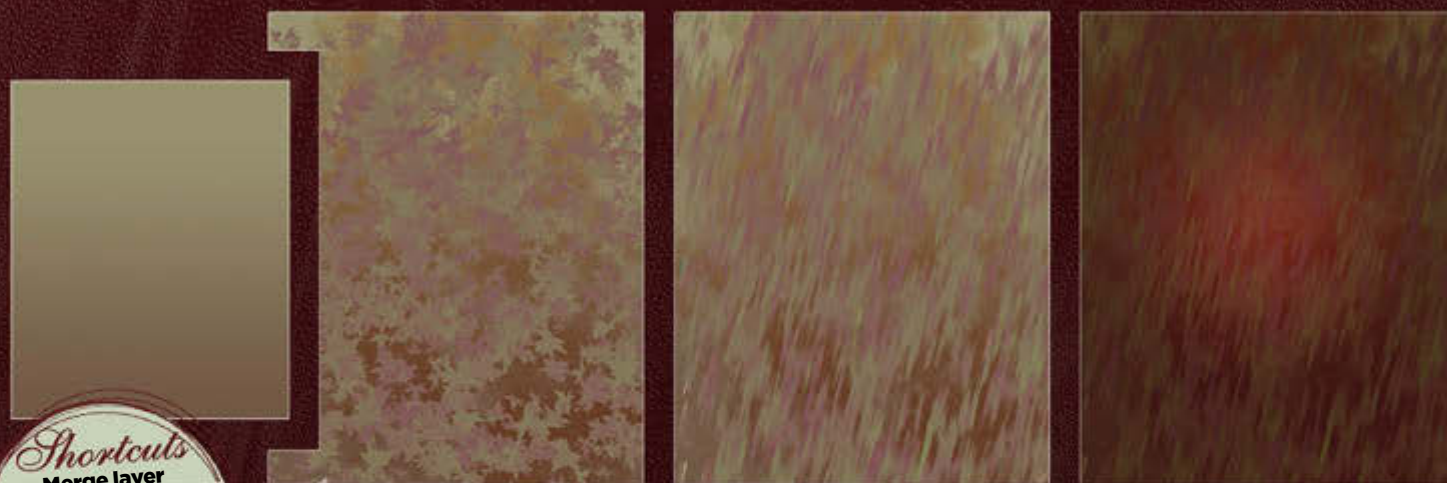
All of these make a difference in my approach because depending on those factors I'll attack an image differently. For example, if I'm designing a character for a production, like a movie or a video game,

I might do paintings initially that are only black and white and perhaps a bit looser so that I can come up with a variety of design options for the director to pick and choose from.

In contrast, if I'm given the freedom to design a character without the constraints of a really quick turnaround and the need for many variations, I'll treat the concept more like an illustration – planning and painting an original piece of art at my own pace, while at the same time meeting the needs of designing the character or

creature. This was more of the approach I took when tackling this image.

I wanted to paint a sci-fi character, and so I decided on a Martian. Next I asked myself, "What does a Martian look like?" I wanted to bring both expected and unexpected aspects into the design. Martians are from the Red Planet and are typically depicted as little green men. So I decided to use red and green as the two main colours in this painting. This was a great foundation for the beginning of my illustration.



Shortcuts
**Merge layer
down**
Ctrl+E (PC)
Cmd+E (Mac)
Quickly merge the
selected layer to the
one below it.

1 Background base
When starting a painting I almost always begin with a background base. At the very least I'll make the background a mid-value grey. In this painting, I decide to do a few things to get my creative juices flowing. The idea is to get rid of the scary white canvas and make things interesting. I start by making a simple gradation. I then use the standard Leaf brush and paint all around the canvas. I want to

create some kind of motion, so I use a Motion Blur filter with the distance pixel value set to 279. Next, I decide to sharpen things up by using the Unsharp Mask filter (Amount: 172, Radius: 71.5, Threshold: 0).

After that I adjust the overall colour palette to include more red, because I know that the Martian will be green. I create a Hue/Saturation Adjustment layer (Hue: -20, Saturation: +15, Lightness: 0).

Lastly, I apply a circular gradation on a new layer set to Multiply in order to darken the overall painting and reduce the focus on the many different textures and colours.

There are a million ways you can create an interesting background base. This is merely what I came up with for this particular painting, so experiment and find your own different ways to create an interesting background.



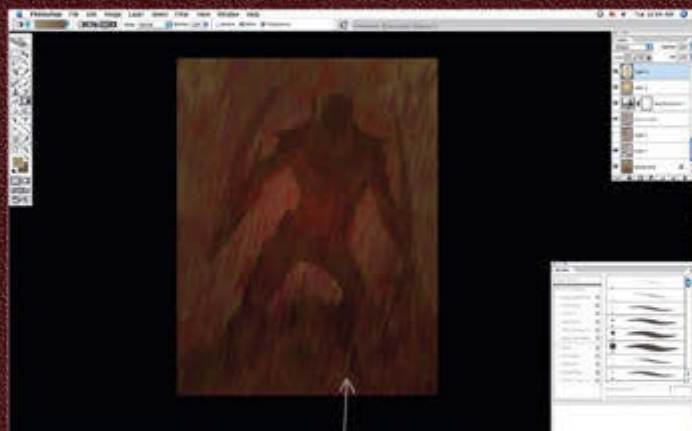
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2 Character sketching

Now that I have a background base I can work with, I create a new layer and set it to Multiply. I then start to paint the basic silhouette of the Martian. I go back and forth between painting and erasing to find a silhouette that I like. I'm creating as I go, and that's the great thing about Photoshop. You can go in a specific direction and make drastic changes at any time. You're never committed like you would be with real paint.



3 Fleshing out specifics

I create a new layer and begin painting the specifics of what this Martian will look like. I want to create a civilised and intelligent being – not just a creature or monster. I give him a typical science fiction-style armoured jumpsuit costume. I also hint at evolved anatomy.



4 Continuing to define the character

I continue painting opaquely, defining what this thing looks like. As I paint, I decide to give him a hand within an arm, or an arm within a hand. I don't want to give him a straightforward-looking human anatomy. As he's from Mars, I think he could have evolved in a very different manner than a human that breathes earthly air. I also continue defining his suit of armour.

5 Defining form

Now that the character is pretty well defined, I begin to work on his forms. This is the fun part because it's where it comes alive and jumps out of the screen. I decide where the light will be coming from and allow that to dictate how I'll render out the forms. This will be a basic top-down light source, so everything I render will adhere to this.



6 Overall adjustments

At this point I realise how dark everything is and make two Adjustment Layers: a Levels layer (with the input levels set to 28, 1.00 and 102) and a Hue/Saturation layer (set to 0, -25 and -19). The Levels adjustment brightens everything up, but also adds unwanted saturation with it. So the Hue/Saturation adjustment works to correct this by lowering the overall saturation.

7 Adding texture

I use a texture brush to give more texture to the background and (subtly) to the character, too. You can create your own texture brushes, use the default ones in Photoshop, or even use photo textures to add texture to your paintings.



8 Background variation

I now want to create a separation between the background and the character. I decide to experiment and try painting on a new layer set to Colour Dodge. I choose a turquoise colour and begin painting around the character. This helps separate him from the background, making his silhouette stronger. You'll also notice that the image has been flipped. I often do this to get a fresh perspective, helping to minimise my mistakes.

PRO SECRETS

Adjustment Layers

Adjustment Layers are great for making non-destructive adjustments to your image. Just click on the circle that looks like a yin-yang symbol in the Layers palette and it will give you a list of options (much like Image>Adjustments). Click on any of them and you can make adjustments that can be deleted or adjusted later on in the creative process. The Adjustment Layer will affect all the layers below it. It's great because unlike Image>Adjustments, it's a non-destructive method.

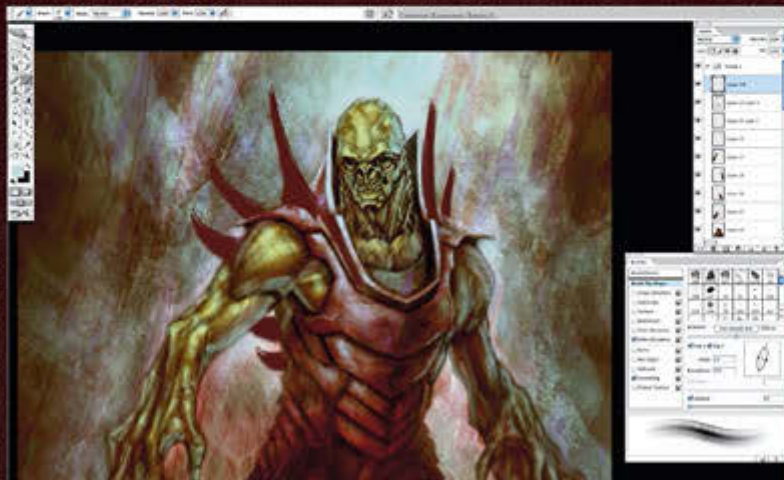


9 Make design decisions as you go

I step back from the painting and feel that the Martian's head looks very squat, so decide to give him a longer neck. It also makes sense with the design of the armour. So what I do at this point is to make a copy of his head and move it higher up, to where it looks right (see Pro Secrets for more on making a copy). I then paint in the necessary details in his neck to complete the adjustment.

10 Add details to tell a story

I continue to add details by painting in teeth and suit attachments. This helps the Martian to stand out, not only in the picture, but also in the society he lives in. It gives him a regal look – perhaps he holds some kind of higher position. Normally when I'm painting a character concept I try to get all the background information and study it before tackling the design. As this is more of a fun exercise, I'm designing as I go – if you're painting for yourself, this is totally fine.



Shortcuts

Hide all windows

Press tab

This hides all the windows, so you can view the image without any clutter.

11 More design adjustments

I decide to make more design adjustments at this stage. I want to lessen the twist and exaggeration in his lower torso, so I make a copy of the entire image (again check out the Pro Secrets), select just the waist and legs, and delete the rest. I then adjust it using Edit>Transform>Warp. I straighten out his waist, hips and legs a bit, and the end result is a stronger and more imposing stance. I also decide to adjust his arms. With the evolution of the Martian's arms it would be good to enlarge and elongate them overall, which will help make the design unique as well as bring more emphasis to it.



12 Darken the edges

I create a new layer and set it to Multiply. I then use an airbrush to paint around the edges. The point here is to emphasise the focus, which in this case is his head area, so I paint around it with a low opacity brush.

PRO SECRETS

Copying an entire image on to a layer

This is very useful for many reasons – one being when you want to make big adjustments to certain areas without having to flatten the whole image. First, create a new layer and then hold down E, Shift, Option/Alt, and Cmd (for the Mac), or E, shift, Alt and Ctrl (for the PC). This makes a copy of the entire image on to that layer. Select only the areas you that want to adjust, delete the rest and make whatever adjustments you need to make in that area.



13 Adding highlights

To add highlights, I create a new layer and set it to Color Dodge. I then use a warm, dark-brownish colour and paint highlights along his arms and armour (especially in areas closer to the light). You'll also notice that I've added more finger appendages coming out of his arm. Maybe this is how Martians' bodies grow and evolve with age.

14 Value check

We're pretty much done at this point. I do a final value check by creating a Levels adjustment layer. I push up the highlights and darken the shadows a little and it stands out nice and strongly. Using adjustment layers are a great way to check your work to see if something needs adjusting (hence its appropriate name).



15 Sharpen filter

Lastly, I apply a sharpen filter to the entire image. I do this by first making a copy of the entire image on to a new layer. Next, I go to Filter>Sharpen>Unsharp Mask and set the amount to 90, the radius to 2.4 and leave the threshold at 0. This gives a sharpened-up look to all the edges and detail of the painting. You can always erase wherever you don't want the sharpened effect to reveal the unsharpened painting underneath. And there you have it – the painting is finished. Of course I can continue adding detail to the forms and colours of the design, but this is meant to be more of a concept illustration or a looser type of drawing, and so isn't really needed.

Photoshop

SYMMETRICAL DESIGNING

Through the process of abstract asymmetrical duplication, **Mike Corriero** explains how to produce dozens of unique symmetrical thumbnail designs

Thumbnail designing is always a useful tool for any artist. It triples the amount of designs you can produce with much less effort, and often yields a lot more effective results than a fully rendered, detailed sketch. This is a process undertaken by most artists, especially in the

professional field when presenting the preliminary phase of a job to a client or company. Here, I'll show you a few different variations of asymmetrical and symmetrical thumbnail sketching.

When sketching you'll need to keep in mind what shapes might end up as a head or arms. However, it's

not necessary to be too precise. Keeping things abstract leaves your work open to interpretation, giving it greater flexibility. So when you're setting up these asymmetrical designs to be copied and flipped, going crazy is encouraged. The more wild and irregular the sketch, the more possibilities it opens up.

It doesn't matter if you use a pen, pencil or digital program to sketch these out because in the end it's the shape and silhouette that matter. You should feel free to let the shapes become exaggerated, and even separate portions, because you never know how they'll be interpreted when you work them out in 3D form.

Artist PROFILE

Mike Corriero
COUNTRY: US



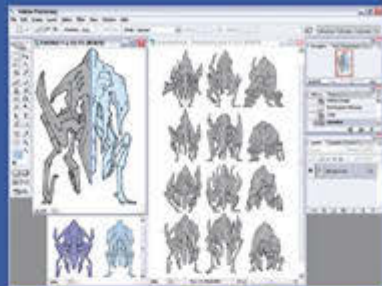
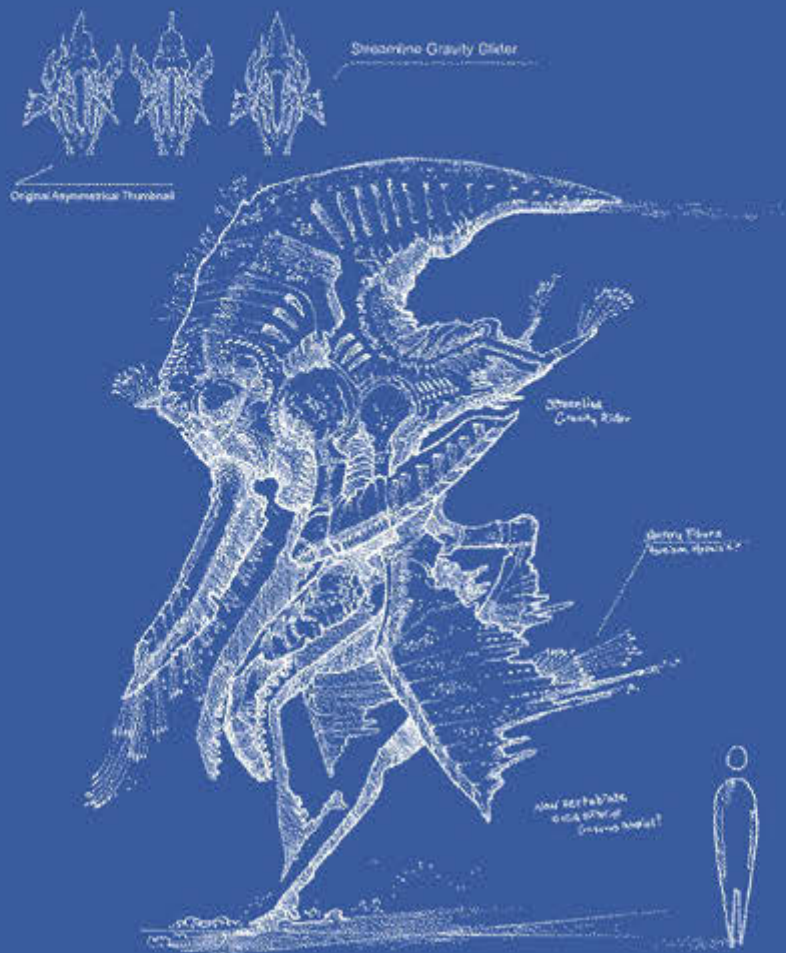
Mike is a freelance concept artist and illustrator for the video game and film industries. His work has also featured in Ballistic Publishing's Exposé 4 and 5. His clients have included Radical Ent and Fantasy Flight Games.

www.mikecorriero.com



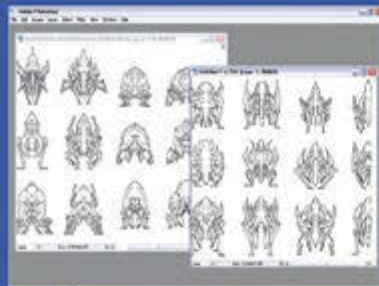
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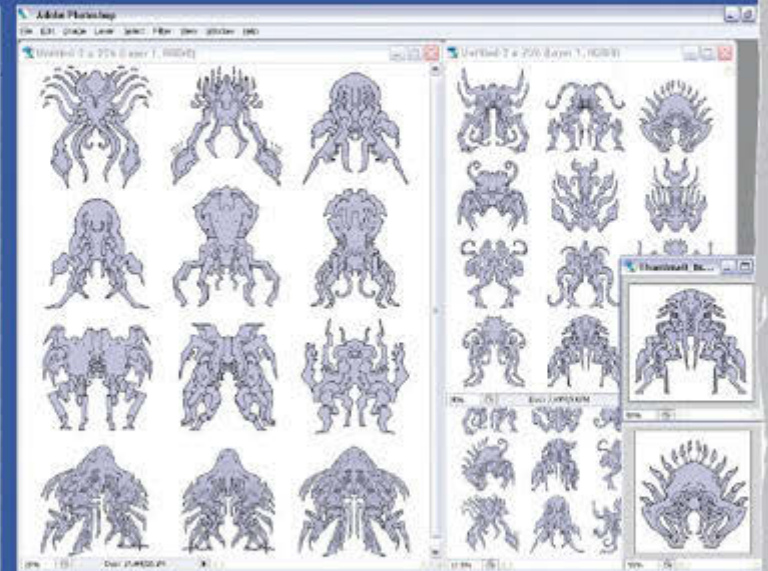
1 Asymmetrical to symmetrical

I've started these designs with a Staedtler 0.05 pigment liner pen on plain paper. Each thumbnail is approximately 1x2 inches. Start by drawing a couple of vertical lines in pencil. These will serve as your design separation points – to create symmetrical designs later on. In the thumbnail that's blown up you can see the design split down the middle. Below it are the two symmetrical designs created from the purposely asymmetrical design in order to produce two similar but unique shapes. To the right is a set of asymmetrical concepts, which you can see were each designed to be unique, with different elements, varying amounts of limbs and a mix of height and width.



2 Copy flip method

To produce double the amount of concepts in terms of symmetrical designs, I took the asymmetrical versions – selecting one half with the Rectangular Marquee tool. Then, by using the copy and paste method, I flipped the second paste of the same half horizontally. With my settings applied to View Snap, it's quick and simple to drag and align the duplicated selection to meet and snap together. Just repeating this process with the opposite side of the thumbnail will provide a second symmetrical design. This brings the original 12 thumbnails to a total of 36 designs – of which 24 will be symmetrical only – having taken one third of the amount of time it would have taken to produce 36 individual sketches.

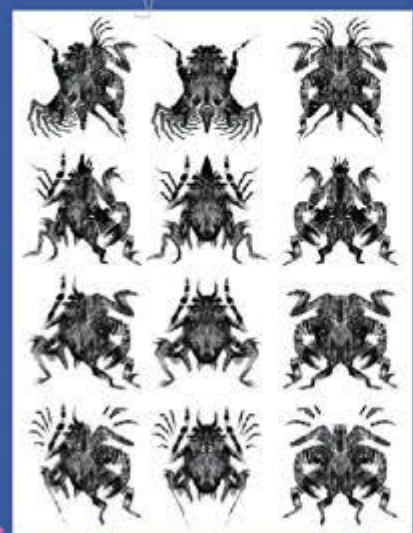


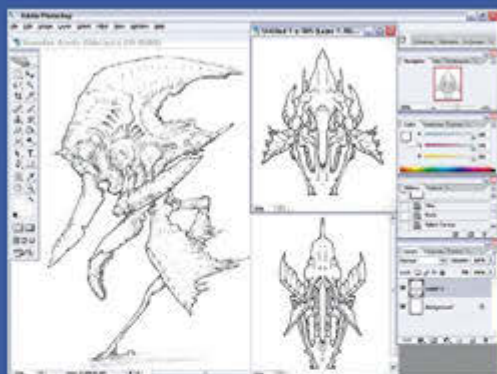
3 Asymmetry

In our world there are examples of asymmetrical life forms – usually crustaceans and sometimes fish – but it's rare as most life consists of symmetrical biological constructions. In order to more easily read my designs and distinguish the differences, I've selected all the negative space, inverted the selection and, on a Multiply layer, filled the designs with a solid colour. It's very easy to manipulate a design via Free Transform if I decide to make it more streamlined or stretch it out. I can even mix and match various portions of one design with another by overlapping a selection and fitting it to the width or height of the other thumbnail.

4 Digital thumbnails in silhouette

One other method I use on occasion is the silhouette technique, which is very quick and easy to produce digitally. Using the lost line technique and erasing out the details or separation of shapes is highly useful and makes it easy to produce many designs from just one shape. When you are working with the digital thumbnail in a silhouette manner you can manipulate the shape in hundreds of different and varied ways, erasing and working as you go with a strong use of positive and negative values. Overlaying and Warp transforming (while providing texture) and a rapid Transform repeat technique makes it all so easy to go from one hundred sketches in a matter of minutes – and when you're working to a deadline that's very useful! ➡





5 Evolution of a thumbnail

Now that the thumbnail process has been completed and I've produced around 80 designs, I've chosen two that are close to what I want and have started to sketch my design using the pigment liner pens. It's easiest to start this process by reproducing the large, dominant shapes from thumbnail to final design. I'm taking an easy way out here with a semi-profile view of this life form.



6 Detail and mirroring

How much work you do here is up to whether you want to keep the sketch rough and loose or detailed and refined. Mirror your drawing by first producing the line work and shapes that dominate it then just duplicate the necessary limbs and biological elements to the other side. If you're happy with your sketch, shading in at this point can sometimes help cut down on painting later on.

7 Sketch complete

I complete the final sketch with sensory fibres, shading and minor details. It actually takes much less time if done using a pigment liner rather than a pencil, as it helps to steady your hand and produces more confident lines if you can't erase. Using small 0.05 Staedtler pens also enables you to shade and control line weight effectively. I line up some of the thumbnails that I liked the most next to the final image, to see if anything else inspires me.

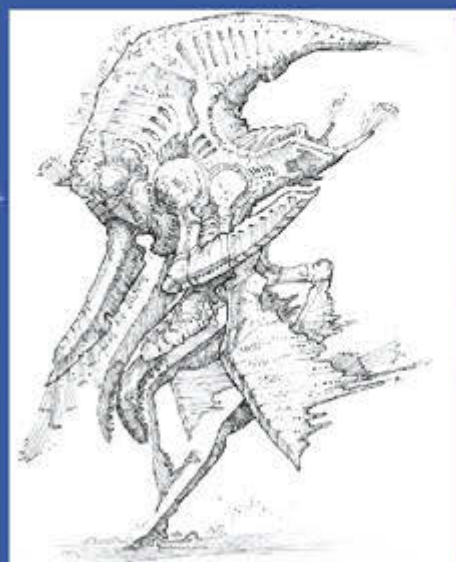


8 Base texture

I've used a texture photo of an old worn-out wall, which comes courtesy of www.mayang.com/textures, to give my sketch some colour and a base to begin my painting. I just pasted the photo, rotated it and enlarged it to my liking.

9 Establishing a setting

With the use of additional photos from Mayang's free texture library, I've laid down a ground, which was actually a photo of a termite mound, and overlaid another texture on top of the wall photo. At this point I'm just playing with colours through the Hue/Saturation options to find anything that works, keeping in mind what I'm aiming for, which is an unearthly setting and a blue/pink colour scheme. In addition, at this point I've gone back to the original sketch layer and selected and inverted it, filling it with a pinky base colour.



PRO SECRETS

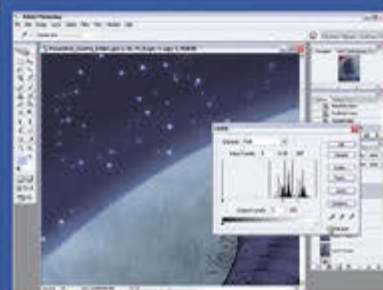
Transforming a shape

Create a shape on a new layer then select it. Now hold down Alt/Option+Ctrl/Cmd+T and that should copy or transform the shape. Then use the Transform tool to move it in any direction, shrink or enlarge it a little and rotate it a bit. Next hit Shift+Alt/Option+Ctrl/Cmd+T and it will repeat the action, and if you hold down Shift+Alt/Option+Ctrl/Cmd and just keep hitting T it will continue to duplicate the action as many times as you want.



10 Colour flow

Keeping elements on separate layers makes it much easier for me to play around with the values, the hues and colour shifts. In order to build up colour gradually, I want to use cool, muted and darker tones all from within the same colour spectrum.



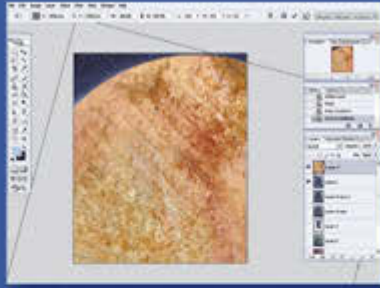
11 Defining the location

To complement the curved dorsal shape of the creature's cranium, I've used the Circular Marquee tool to create an arch and set the beginning for my planet in the backdrop. In order to create a striking planetary lighting effect, it always helps to paint a glow produced by the atmosphere, and to continue the light around the source as it hits the sphere.



12 Planet surface

A quick light and dark value texture is applied with a stippled concrete pattern, inverting the texture to make the pattern more prominent. Reducing the scale of the pattern as it nears the lit edge helps create an appearance of the texture wrapping around the surface.



13 Gouged soil
With the use of another photo texture cropped to a circular shape and framing the planet, I can provide a contrast in colour between the foreground and the background. It's also being used to supply additional texture and quick colour variations.



14 Overlay
By setting the gouged soil photo texture to an Overlay layer on low Opacity it will give the appearance that it's sitting on top of the planet. It will sink into the existing colour and textures while still affecting the values and the shifts in hue, appearing as different colourations in soil or varied locations and elevations. Erasing with a soft airbrush and breaking up the strength of the photo texture also helps to achieve a more natural appearance. Duplicating the layer will increase the strength of the Saturation and Opacity, which is useful if you want to light a section on one side and leave the other in shadow.



15 Atmosphere and particles

What I've found to be an effective way to knock down the strong, clear pixels of a photo in order to give it a more painted feel is to copy and paste a selection directly on top of the image. I then apply a Motion Blur on an angle in whichever direction is appropriate and set the duplicated layer on a low Opacity. This is a great and easy way to supply a misty, soft atmosphere and to help cut down on the harsh pixels that photos sometimes produce in contrast to a painting.

16 Gravity Glider edging

On a new layer above the background and above the sketch, I've started painting dark and light values – working out the forms and shapes of the streamline Gravity Glider. This character has a complex design so I'm trying to keep a good deal of it in shadow, especially since bioluminescent light will play an important part in the creature's biology. Edge control quality consists of defining the silhouette by applying reflective and local colour both from the dominant light source and colour from the background.



17 Contrasting bioluminescent

Important parts of this life form are also important parts to the focal points and interest of the painting. The sensory fibres help this creature in many ways, from its sense of touch and vision to its mating habits and digestion. They're also a great element for the environment in which it lives, as living in space is similar to living in the deep oceans of earth.

PRO SECRETS

Ask why
Designs are limitless so long as you take into account all aspects of why something looks the way it looks. It's the question 'Why?' that comes into play, and if you can find answers to the question for the idea behind a concept, you'll find a much stronger design. Why does it have three legs, how does it eat, where does it live, is it dangerous, does it lay eggs or carry a baby in a womb? Make sure there is a reason why in answer to all questions.



18 Glider's skin
Using a scratched glass bump pattern created from Mayang's texture library, I'm using the same light and dark value invert technique as in step 12 for the planet's surface. In order to get the most out of my texture, I desaturate the colour, pump up the values and make sure there are no seams so it repeats continuously. Set the Depth to its full extent, the mode to Multiply and check the box that says Texture Each Tip.



19 Not alone
I sketched out these little guys during my thumbnail creations. I felt they would do the job of providing some sense of scale. I only painted one, but by adjusting the scale, the angle and the position of the wings – among other things – the effect of many can be made with ease. Keeping with the deep sea and space theme, I kept the smaller life forms completely bioluminescent to provide enough additional eye candy without being a distraction.

20 Light, value and that's a wrap

The last thing I do before finishing a painting is to take a day or a few hours away from it. When I come back I may find that it's too muted, there might be something missing or the lighting isn't right. So here I have used the Brush tool on Overlay to create a stronger sense of light on the planet and adjust the overall light value.



"The 20 points I consider to be the most important parts to composition"

Gary Tonge (page 114)



Environments

The tips and techniques behind painting realistic science fiction environments are tricky. In this section we take a look at some core areas to master, including colour, perspective, proportions, depth and detail. Once mastered, you'll be able to let your imagination run wild.

Featured artists



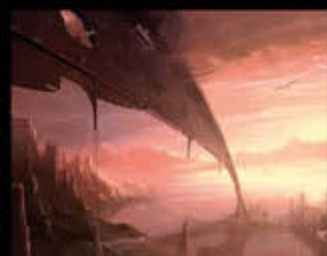
Dr Chee Ming Wong



Dr Wong works under the name Koshime, and has over 14 years experience as a creative visual

artist. He worked as an external environmental art consultant on BioShock 2. For his workshop, he has created a vast space battle to demonstrate how to create individual elements and combine them into a whole.

www.opusartz.com



Gary Tonge



Gary is a concept artist and art director who's worked for many leading video game and book

publishers. As an artist he is fascinated with the technical aspects of painting, using light, colour, perspective and depth. So you'll be glad to see that his workshop will teach you how to create a cityscape and get the composition right.

www.visionafar.com



Mike McCain



Seattle based artist Mike loves Star Wars and creating exotic worlds and scenes. His

workshop aims to teach the basics of perspective, depth and composition in a painting, ensuring the final picture draws in the viewer and demands to be seen. Note Mike's strong use of colours and loose detail.

www.mikebot.net



Ryan Church



Few major Hollywood movies get made without the input of Ryan. His recent projects

include Transformers 4, Star Trek and the multi-award nominated Avatar. His workshop here is a great space opera, a clash of machines that demonstrates how to create a cinematic science fiction scene.

www.ryanchurch.com



Ioan Dumitrescu



Romanian artist Ioan paints science fiction for many major book publishers, creating exotic

covers for their new novels. His workshop focuses on the clever use of light and shapes to create visual interest. If you want to learn how to light a night-time science fiction cityscape, start reading now!

www.ioandumitrescu.com



Alex Broeckel



Alex has more than 16 years experience working as a 3D artist, creating environments for

many movies, include Harry Potter and the Prisoner of Azkaban and Roman Polanski's Oliver Twist. His workshop here is designed to teach you how to build an environment from scratch and render the final image.

www.alexbroeckel.com



Leong Wan Kok



Leong has over 20 years experience in the art industry, working in comics, 3D

design and illustration. He's also a co-founder of the award winning 1000Tentacles Studio. This workshop demonstrates how to sketch and create a weird alien world, its creatures and colours in his unique style.

www.1000tentacles.com



Bill Corbett



Bill grew up in an artistic family, and soon went on to become a graphic artist by trade. Marriage

and fatherhood led him to abandon the art world for a safer job for a while. But now he's back, and in the last few years has produced stuff for games, bands, books and magazines. See his old-school sci-fi workshop on page 146.

www.billcorbett.co.uk

Painter & Photoshop ILLUSTRATE AN EPIC



Dr Chee Ming Wong takes you through the step-by-step process of illustrating an all-out space battle scene to beat all others...

When you tackle any illustration, it's best to first come up with a theme or storyline. Here I'm going to share with you my entire workflow for generating an illustration of a space battle. This will build upon the initial idea of producing strong conceptual design of unique

SPACE BATTLE



spacecraft – in this instance drawing space capital ships ranging from small to large frigates and large interceptors to destroyers, carriers and battle cruisers.

The story that I've created involves a raid by a modestly large fleet of capital ships upon a deep space mining facility situated near the thin arm of a nebula.

With that concept in mind, all the transport designs should either have heavy armour-plating or sufficient shielding (depending on their tech level).

For the purpose of this workshop, I have split the two into opposing forces, each with some general differing traits. The main defence is heavily armoured

with a bulky transport design, which fire red lasers. This includes a large, deep-mining facility with huge, heavy canons and a few heavily armoured destroyers, carriers and frigates on the perimeter.

The main offence will consist of a sleek, long angular design with minimalist features. They fire blue lasers.

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Artist PROFILE

Dr Chee Ming Wong aka Koshime

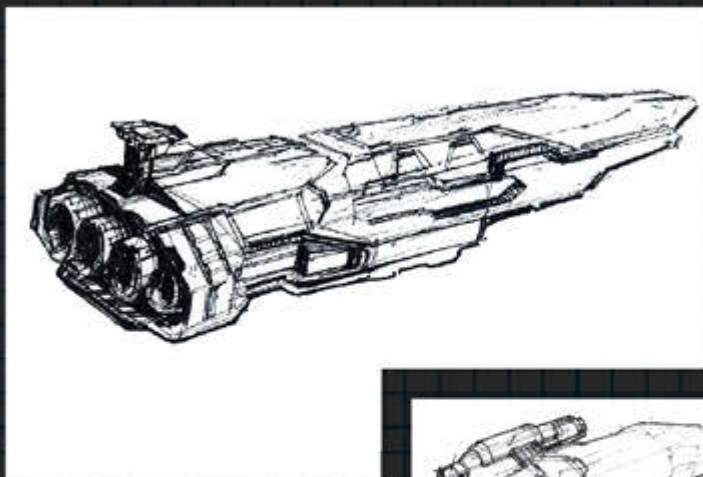
COUNTRY: England



Dr Wong has many years of creative visualisation and pre-production artwork experience, having freelanced on a range of independent game projects, publications and CGI pre-production artwork. In addition to all this, he also hosts free digital workshops and tutorials on CGSociety, ImagineFX and CGPAD forums under the alias of Koshime.

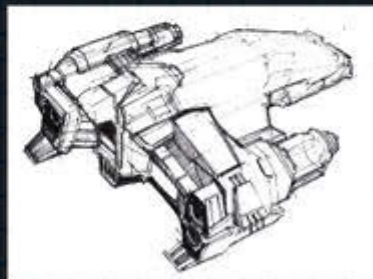
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1 Initial sketches

Using the battle plans and storyline that I outlined in the introduction, I work on various designs for both the battle station and the various ship transports using an iterative process.



4 Establishing the value range

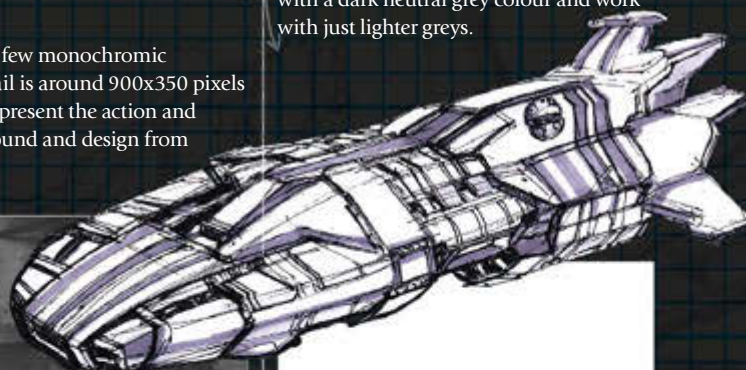
I use this opportunity to establish my darkest darks and lightest lights, to provide a range of values to work with. For objects in the distant background, a simple sweep of the airbrush at low opacity enables atmospheric perspective to register vague, general shapes. By using this process we have effectively delineated the principles of foreground, midground and background – and if the composition works well as a thumbnail, chances are it will work compositionally throughout the whole process and final image. In addition, out of this process, the main opposing force battlecruiser is generated digitally (almost by grand design) as a lucky accident.

5 Rendering: from line art to a digital model

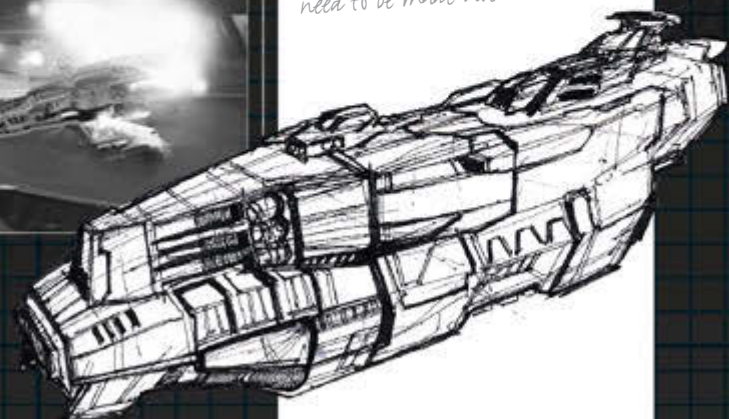
When incorporating sketches or line art into a digital workflow, the quality of the line work is paramount. Try to clean up and refine the edge of the design as best you can, and then paste just the sketch alone on a new transparent layer. Duplicate this, and set the upper copy to Multiply. You can use the lower (original) copy to block in your monochromatic values. You can do this by setting your layer to Lock Transparency. Now for the 3D effect. I find the easiest way to produce a relatively convincing 3D look is to fill in with a dark neutral grey colour and work with just lighter greys.

2 Mood boards

Based on the finalised sketches, I move on to paint a few monochromatic thumbnails – essentially a mood storyboard. Each thumbnail is around 900x350 pixels at a 96dpi. Out of these, I select three key images that best represent the action and mood of the whole theme. I now have enough basic background and design from which to work up a good space battle.



Don't spend too long creating a 3D look at this stage, as changes will need to be made later on.



3 Initial composition

Using the initial thumbnail, I expand the canvas and resize up to 1,800 pixels wide. I then fill this canvas by duplicating the image of the space station and start to incorporate elements of the design sketches and mood storyboard into the composition. Using a mixture of compositing and painting, the main aim is to generate a key frame to sit well in the background.

Environments Illustrate an epic space battle



6 Composition

Reincorporate this hero transport into the main composition. Because of its relative detail, it's best to position it near an area of interest or focus for the eye. In this instance, I position it opposing the attacking hero vessel, so as to take on the theme of two forces approaching one another from different sides. In addition, it's probably useful to resize your image by half (up to 3,600 pixels wide) before adding colour.

Shortcuts

Layer options

Shift+Ctrl+N (PC)
Shift+Cmd+N (Mac)
Paint and adjust colour, lighting and mood without deforming the underlying layer.

7 Initial colour pass

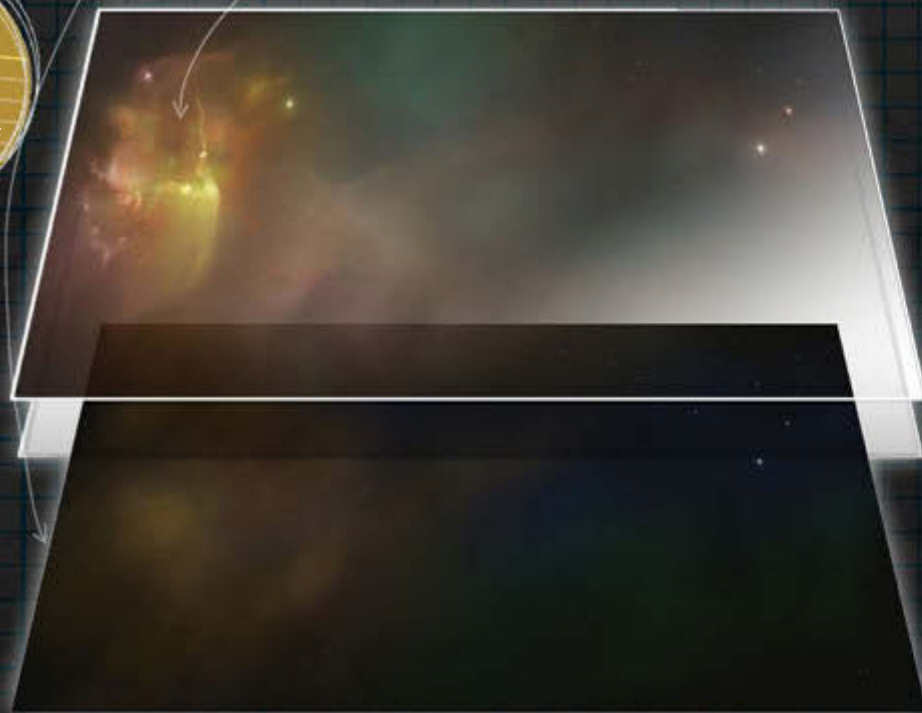
Fill a new layer with a gradient fill of any colour (we use blue in this instance), and set the layer option to either Overlay or Multiply. After some adjustment with the Opacity, this will produce a basic colour tint to your monochrome painting. Try to add a second complementary colour to work as a highlight using the same process, then erase out the undesired portions. In Photoshop you can use the layer options to make a new black and white layer with colour tint, then apply a gradient function. Repeat with another colour. This is essentially the same process in four clicks.

8 Nebulae 101

Space to the naked eye is mostly grey with varying points of luminosity. Nebulae have a certain colour palette dependent on their constituents: hydrogen alpha (red), helium II (blue) and oxygen III (green). Since nebulae are 99 per cent gas, of which 90 per cent is hydrogen, it makes sense that they are mainly red with various elements of blue and green, depending on the amount and type of ionised gas. As such, this enables us to accurately paint swathes of red-orange with some trade off between artistic licence and accurate scientific portrayal. It is also entirely possible to paint a purely blue or green nebula.

9 Building nebulae

For such purposes, I favour the use of Painter because of its blenders and naturalistic brushes. Start with a dark grey background and fill in some swathes of yellow and red to represent elements of hydrogen (and fusion with helium), to create a strong, dense core. Elements of blue and green can represent ionised gasses of helium, oxygen and other elements on the fringes. Once some rough colours are put down, use the Blender tool to smudge and create an even, cloudy effect. Next, use the Glow tool to create a strong, bright core and the nearby stars by hand on a new layer. Once you have painted a few stars, you can duplicate them to multiples to create a whole star field.



10 References

For a study of nebulae and star fields, I can recommend the astrophotography books of Robert Grendler, and the images produced by the Hubble heritage website at heritage.stsci.edu. Any image taken via a telescope is only in pure greyscale. Colour is painstakingly added by various individuals or scientists for representation or general publication, while false colour images are used for interpretation of data, including radiowaves.



PRO SECRETS

Up the resolution!

Paint your final image at least twice the resolution of your intended output. For example, for an image of 1,600x900 pixels, try to paint at 3,800x1,800 pixels. This enables you to use broader strokes and add much finer detail – so much so that by your final image, the client will be astounded by the quality of your illustration.

11 Local glow and effects

The main aim is to incorporate the colour and variety of the nebulae into the existing image. Copy the nebulae on to a new layer and set to either Overlay or Hard Light, and adjust the Opacity accordingly. Keep a spare copy of this as we will reuse it over and over throughout the project. Now flatten the whole image, and work on introducing some darks and lights using the Muted Color palette. This process is akin to painting watercolours, where colour is added via thin multiple washes. Just remember to evenly distribute your attention on all parts of the canvas, and only have lavish detail on the main focus area. This way, no part of your illustration will stick out like a sore thumb.

12 Adding more colour and light

Using an Airbrush, set your brush to Color, or Linear Dodge and low Opacity to bring some colour and light to your key explosions and lighting. Once you have done this, you can now add hard rim lights to the edge of every vehicle that may require attention. This immediately gives the feel of a hard surface of a mass that's relative to a lighting source, and looks very effective.

13 Lighting in space

In space there is minimal ambient light. All the lovely images you see about space is a result of multiple hours of exposure. The luminosity of the stars is minimal and the colour is often hard to even see, to the point that it's best ignored unless from the local star, nebula or supernova. So, how then can you really light your objects and make the battle look exciting? A realistic painting in deep space could well be a pitch-black canvas with only tiny, faint dots on it, and the outline of a space vessel merely marked by the absence of light. Fantasy, sci-fi and even scientific artists have pondered how best to illustrate such subject matter. A useful fallback is to paint a distant nebula in the backdrop and to add local lighting, including light from the ship panels, or perhaps laser beams, or explosions.

14 Hero vehicle detail

Earlier I created a monochromatic hero vessel. Now I take the same hero vessel, make a new file, and double the image size. This enables me to add textures and ship details while eliminating various design flaws and make minor adjustments. Since this is the main focus of your image it needs to be fairly detailed. I use this opportunity to paint in mid-tones, and attempt to eliminate any harsh contrasts and dark lines. However, this can be an arduous challenge. The fact is, on its own the ship looks great with high contrast, but not naturalistic in the grand scheme of things – it's perhaps too detailed for use. Nevertheless, let's bring this concept back into the painting. Try to soften any hard, dark edges which have a light background. I find the Smudge tool's the best approach for this.





15 Bits and pieces

We need to tackle the colour and lighting even more now. In Painter, you can use the Lighting option to add in general ambience and colour lights. In Photoshop, you can manually Gradient Fill a layer and set it to Linear Dodge. Use whichever program you favour. I prefer to use this opportunity to move back the detail from the hero vessel by using a very low Opacity Airbrush to push it backwards into the midground and obscure some details. I also use the opportunity to add more coloured glow to the explosions and perform some general tidying up of the image all over. It's best to do this in a circular fashion to hit all the key areas. Once satisfied, I flatten the entire image.

16 Let there be stardust

Duplicating the entire illustration, I set a Film Grain filter and lower its Opacity to about 30 per cent. This is to simulate the diffused and diffractive nature of multiple fine particles in space. Erase out the dust layers for objects in the background, but retain some of it in the fore and midground. One satisfied, I flatten the whole image and use Painter's Blend tool to work back the nebulous background and stars into the image.

17 Laserlights and explosions

Now I switch back to Photoshop and, using a new layer I hold the Shift key down, and in Brush mode apply a stroke



Painter has a fantastic toolset, and by using the free transform tool, you can play around with the colour until you get the convincing laser lights and explosions that you're looking for.

across the canvas, using a neutral base colour – I choose blue. Next, change your brush to the default Hard Round brush, set it on Color Dodge at a smaller diameter and swathe across a few times. This will generate a pillar of light, with a bright central core. Apply the Free Transform tool into this layer and adjust to form large, long beams, or multiple smaller beams. Repeat and rinse all around – just don't overdo it as it can get very messy.

18 Final adjustments

Flatten everything, and make the appropriate colour grading (according to your own personal taste, of course). You will find that this is easiest to achieve by using the Layer Options mode in Photoshop, enabling you to paint these changes without causing any unwanted and distracting amendments to the underlying layer.

19 Realistic vs romantic ambience

Once all the above is complete, I only need choose between a realistic or romantic ambience. I have included both images on the disc for comparison. The realistic lighting image has a faint blue filter but is otherwise much darker, with only tiny pinpricks of lights and explosions. I much prefer the romantic ambience, though, whereby you approach an image as if you can see the full spectrum of visible and non-visible colour. This allows for more greens and blues to be brought in, making it akin to an impressionistic style of depicting outer space.

PRO SECRETS

Tools of the trade

Use Painter's natural brush set for its exceptional blending and oil brushes. Try not to limit yourself to just one tool. If there's a better toolset to produce the effect you want, try to learn it. By learning how to use both Photoshop and Painter you can get the best from each application and also compensation for their respective flaws. The end result is what is most important, though, regardless of the methods used – and always remember that the client is king.



Artist insight

GETTING COMPOSITION RIGHT

Composition is key to illustration work.
Gary Tonge shares his essential advice



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Creating an interesting and inviting composition is the key to pleasing illustrations. Images that are strongly composed with well-solved elements will draw a viewer into them and hold the eye while the details you have spent so much time slaving over are taken in.

Conversely, a badly composed image can undermine even the finest painted subjects, generating a subjective feeling that something is wrong. Many may not be able to put their finger on why, but the image will be less pleasing and read poorly, which, ultimately, will not hold up to scrutiny. The next few pages contain 20 points that I consider to be some of the most important elements of composition – the rules I lean on subconsciously every time I pick up my brush. Want to know more? Read on...



1 FOCAL POINT

Every strong composition has a dominant object, or focal point (FP), that provides the fulcrum to the rest of the image. Everything else in the image should try to complement or frame this element. A focal point could be anything from a skyscraper in the distance to a small paper cup sitting on the window ledge of a skyscraper overlooking a city. It's imperative that the focal point be well solved into the image. There are a couple of straightforward ways to place your focal point – The Rule of Thirds and The Golden Section – but I will not go into details about these here because I like to push beyond these rules, attempting diverse layouts while still maintaining a pleasing composition.

Artist PROFILE

Gary Tonge
COUNTRY: England



Gary is an art director in the games industry and also takes on freelance commissions as a concept artist, illustrator and matte painter. He prefers to express enormous vistas and grand scenes with his personal work.
www.visionafar.com

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2 POSITIONING OF OTHER OBJECTS

Other elements in the composition should harmonise with the focal point and therefore strengthen the overall composition. Carefully placing elements will pay dividends, adding depth, balance and believability to the final image. Some examples of this are the landscape swooping off into the distance in Nimbus (right), which helps underpin the arched structure, or the smaller vehicles tending to the craft in Prometheus (main image).

3 SCENE TO SUBJECT UNITY

It is of vital importance that all elements within a scene look like they belong there. Ensure that shapes and structures in the distance, for instance, are sympathetically influenced by any atmospheric conditions between them and the viewer, or that structures and objects receive light correctly and cast appropriate shadows. If you get this right it adds greatly to the composition. Get it wrong, and it can unravel the entire scene. A good example is the craft on Prometheus, which casts shadows onto the dock and surrounding buildings, greatly increasing the believability of its position in the scene.

4 FRAMING

In a complex composition it can be useful to add cohesion to the



perimeter of a piece by framing, which can help contour the viewer's eye into the picture and hold it there. This can be achieved by gently bringing shapes into the scene, or the use of strong silhouettes to help guide the eye toward any areas of interest – most commonly the focal point. Prometheus demonstrates this well: I have framed the top of the image with a large docking bay.



“When deciding what colours are going to be dominant in a piece, it’s important to remember that generally the image will be either cool or warm in feeling”

5 AVOIDING TANGENTS

These can be quite destructive to the way an image is read and should be avoided. Tangents are lines from separate elements which follow on from each other, causing reading problems between the intersecting shapes. A good example would be overhead power lines intersecting directly onto a corner of a building. Shifting the power lines up or down so they meet the building away from the corner will mend the problem, and make reading that part of the composition substantially easier and more pleasing.

6 TEMPERATURE

When deciding what colours are going to be dominant in a piece, it’s important to remember that generally the image will either be cool or warm in feeling – it can’t be both at once (unless it’s a panning matte, but that is essentially two or more images). There is no problem in having both types of colour in a piece, but one must dominate, even if only a little, as in the Dungeon rope bridge image (below).



7 DYNAMIC VALUES

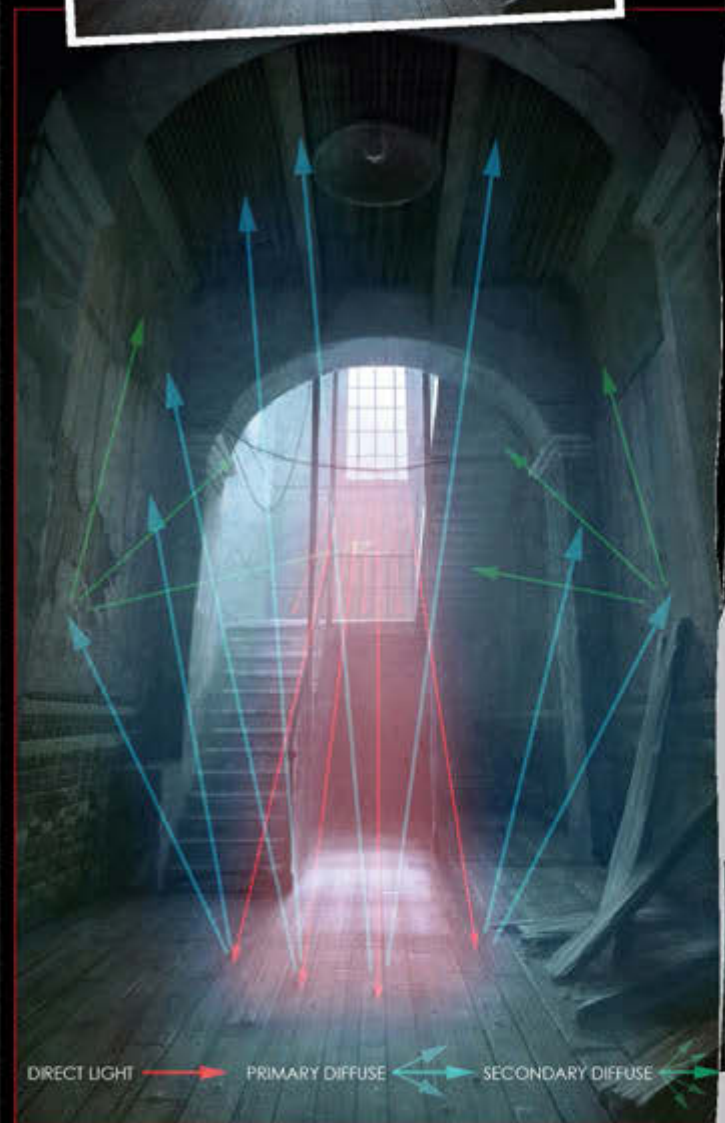
Tonal values are an important attribute in generating **interesting compositions**. Ideally you want to aim for a balance between light, mid-tone and dark, using at least some of each. Look to create a **nice balance** with a large amount of one value, a medium lot of another value and a small amount of the last, maybe 60 per cent dark, 25 per cent mid-tone and 15 per cent light for an image like The Room (top right).

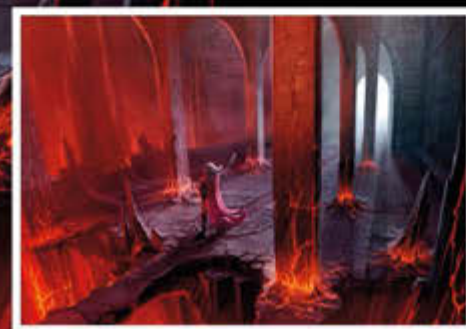
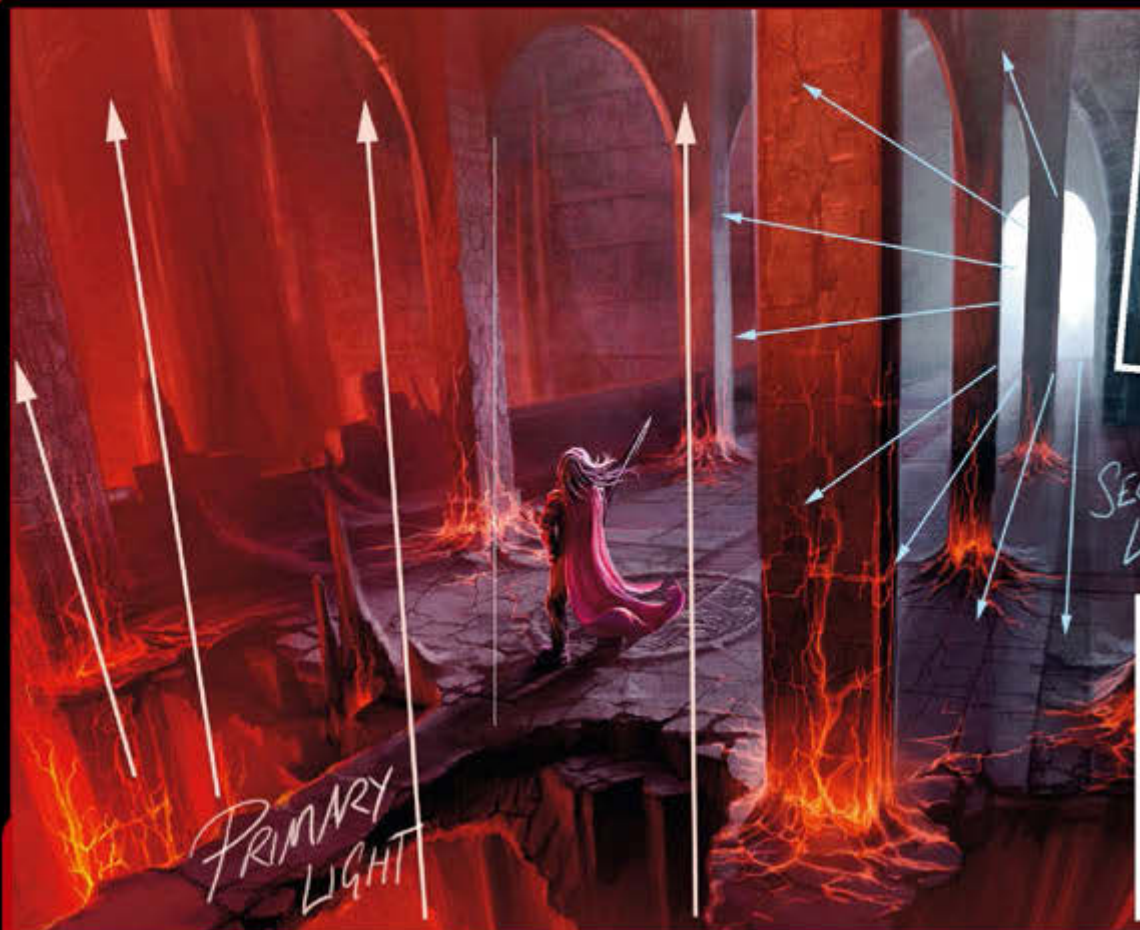
8 DEPTH

Depth and perspective are incredibly important. Vista images require an organised and believable depth using certain perspective cues to draw the eye deeper into the image. These elements could be a fence, railway track, cityscape or even something as subtle as a line of similar coloured flowers in a field. Even within smaller scale still-life images it is greatly beneficial to create depth to hold the image together and draw the eye towards the focal point. All the best composed images look like you are viewing them from within.

9 KISSING

Related to tangents, kissing refers to **shapes just touching**. Elements within a scene should either be definitely apart from each other or definitely overlapped. Kissing elements create a weak, connected shape, which distracts the viewer’s eye, causing a pause in reading the piece. Either ensure your shapes **positively overlap** or keep them apart – no kissing please!





10 LIGHT

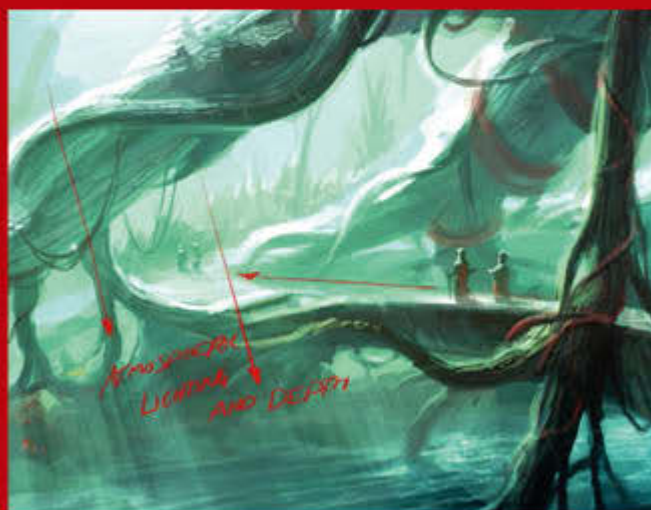
Once the basic shapes are in place this is the **most important element** for me in an image. Getting the lighting right in a composition is what I focus on once I start painting up a drawing. I have broken this into a few sections to help explain the different elements involved in creating **cohesive lighting**, and therefore believable compositional balance.

11 LET THERE BE LIGHT

Choose a position for the primary (strongest) light source – the sun, a window or streetlamp, for instance – that will produce the greatest opportunity for convincing shape description of subjects and make some interesting shadow work. The primary light source can be the fundamental part of a composition and even its focal point, as it dictates how everything within its influence will be painted. Without light, we see nothing. That's how important it is, so be sure you get it right.

12 SHADOWS

Shadow work can be used to great effect to reinforce subject shapes, solidify objects into the scene and add additional framing to the composition if used cleverly – for example the shadows cast down from the upper dock structure onto the lower promenade in Prometheus. Importantly, shadow's effectiveness relies greatly on the initial light source positioning.



13 ADDITIONAL LIGHT SOURCES

Secondary and tertiary light sources are significant factors in balancing the final composition. Secondary sources could simply be the **diffuse or sharp light** reflected back from surfaces lit by the primary light source, or attenuated lights including street lamps and car headlights – even a light source that is nearly as strong as the primary. Using secondary light sources adds an opportunity to **increase detail**, solidity and to reinforce the position of elements in a scene.

14 ATMOSPHERE

Atmospheric depth and occlusion are very important ingredients in solidifying the composition of a piece – be it a large vista where the sheer amount of air between the viewer and horizon transform colouring and tonal contrast in the distance, or a smaller area, where light passes through fine particles in the air to create soft diffusion and subtle changes in colouring (you can see this in The Room). Photonic bounce also adds to the relative atmosphere generating diffuse light, which shoots out from lit subjects, bathing the surroundings with soft reflected light.



15 MATERIALS

Well thought-out and solved materials within a scene are important to maintaining compositional balance. It's crucial to recognise how using highly reflective or shiny surfaces may draw the viewer's eye towards that area of the image. In *Prometheus*, I have used a number of reflective surfaces, utilising their high impact properties to hold the eye in the image and not just become drawn toward the craft. I also pay close attention to making sure that they don't overrun the focal point, but reinforce it. Alternatively, the clever use of dull and dirty textures can help create setting that feel completely different, like in *The Room* for example.



16 LEADING THE EYE

Using elements to draw the eye into and around an image is significant in a pleasing final illustration. You can lead the eye into the piece in many ways, as with an old favourite like a fence or road moving into the distance, or in the case of *Nimbus*, a ruddy great structure piercing the

66 Creating a dramatic feel to an image couples a number of basic compositional rules to underline the depth, scale, speed or stillness of the subject

sky that moves from the top left into the centre. The end result is that the viewer will follow the arch until the end and by then they are in the heart of the piece.

17 KEEPING THE EYE WITHIN THE PICTURE

Once the viewer's eye is within the piece it's important to hold their attention. Going back to the old fence moving from left to right into the distance, you would need something at the right of the piece, like a group of trees or maybe a farmhouse for example, to steer the eye gently back into the composition. Again, on *Nimbus*, you can see the eyeline that followed the arch is held in the piece by the city, the landscape to the left and the close up building to the right.

18 DRAMA

Large vistas and epic images are normally either dramatic or very tranquil. Creating a dramatic feel to an image couples a number of basic compositional rules to underline the depth, scale, **speed or stillness** of the projected subject. In *Nimbus* the large arched structure comes from over the viewer's head, skims the clouds and falls off into the distance to show just how big it is compared to the **relatively small** conventional skyscrapers near its grounding point.

19 BALANCE

Balance within a composition can take some practise, particularly if your focal point is a spectacular or dynamic shape that controls much of the image space. Referring back to *Nimbus*, again, I have balanced the piece by using numerous smaller buildings, the falling away landscape to the left and also the addition of the clouds, which importantly soften

the shape as it approaches the top of the frame. These elements together enable the outrageous focal point to sit in harmony with the rest of the scene.

20 SCALING RELATIVITY

Complex images that show highly differential shapes and sizes require some real life reference to enable



the viewer to understand the actual scale of the subjects in a piece. In *Prometheus* I used a number of people, some close and some far to show the incredible scale of the craft and its dock. You can get away with crazy scaling as long as there is continuity across the scene. The same principles are there for smaller subjects – a set of pencils or a telephone on top of a desk – so that the viewer can understand the size of the table.

Photoshop CREATE DRAMATIC ENVIRONMENTS

Learn how to work with perspective, depth and scene composition to create a compelling sci-fi environment, with **Mike McCain**

Artist PROFILE

Mike McCain
COUNTRY: US



Mike caught the art bug in college, somehow escaping

with a computer science degree, while spending most of his time drawing or buried in Photoshop and Maya. He graduated in 2007 and currently works as a designer in Seattle. He's also slightly obsessed with Star Wars. www.mikebot.net



GET YOUR RESOURCES

See page 226 now!

I love vast, epic environments. Depicting a scene that's both imaginative and believable is one of my favourite design challenges. In this workshop, we'll paint a sci-fi landscape in Photoshop from start to finish, working with scale, colour, depth and perspective to bring together a compelling vertical composition.

Sometimes I start a painting from scratch without anything in mind, but more often I have at least a rough concept in my head before opening Photoshop. With this piece I know we want to showcase some really dramatic scenery, so I've got this idea for a monolithic, mile-high wall. We're at the edge of a completely walled-in nation and this

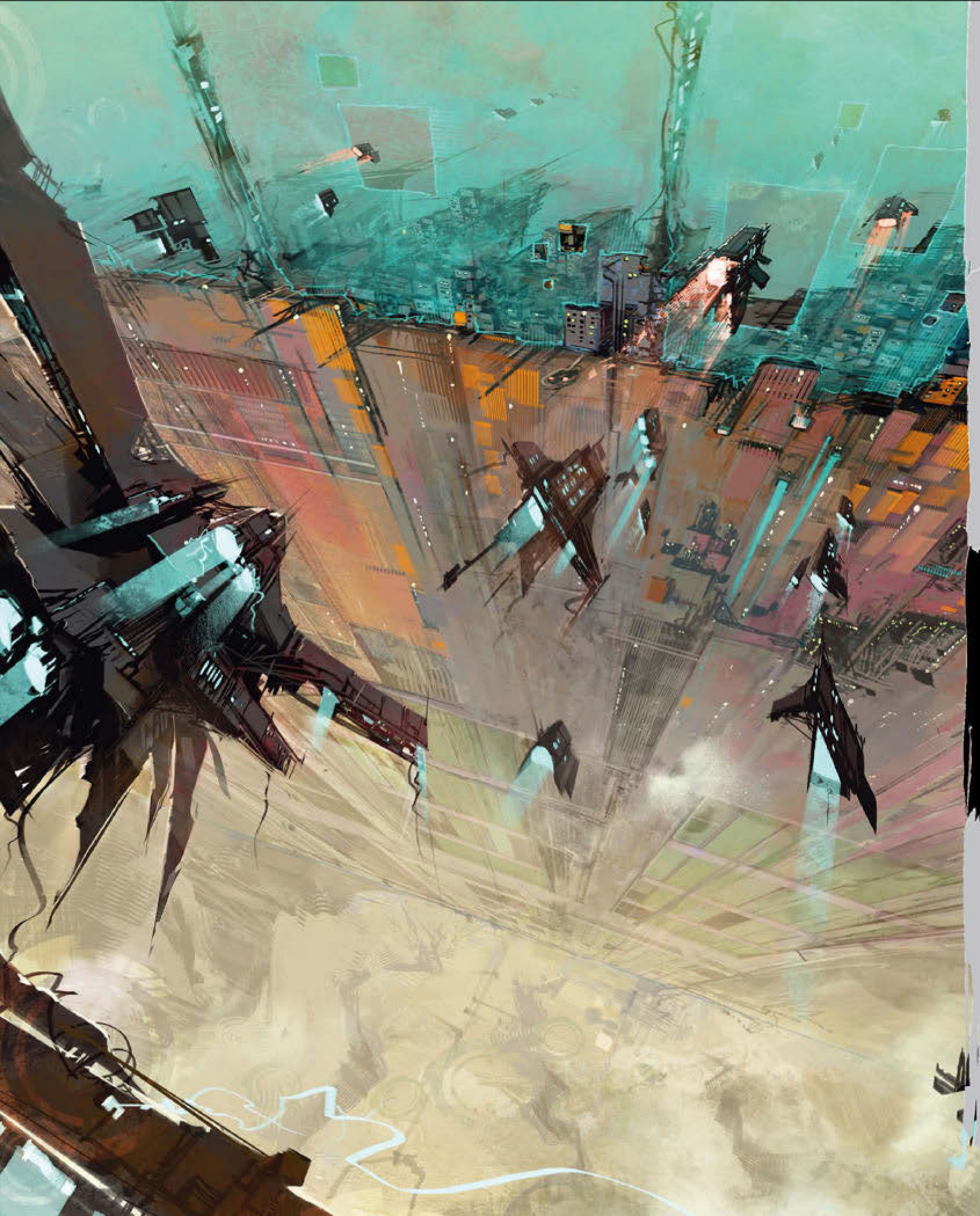
point of the boundary is the only gateway in or out of the country. The wall is beyond ancient, slowly built upon by successive generations. Since this is the only entrance, an entire city thrives along the top and side of the wall. My goal is to give the viewer a grand sense of scale by pushing the perspective and level of detail as much as I can.

1 Concept and reference

I start by finding lots of reference and inspiration, from both books and the internet. In this case we're looking for images with a worn, industrial and large-scale feel. Good reference keeps me in the mood of a piece and inspires new ideas as I work. When I'm happy with what I've found, I bring the images into Photoshop and save out a reference board to keep on my second monitor while painting. Next, I sketch a few quick thumbnails. Details aren't important, I just want to get enough down to define the composition and perspective I want to achieve.



Environments Dramatic environments

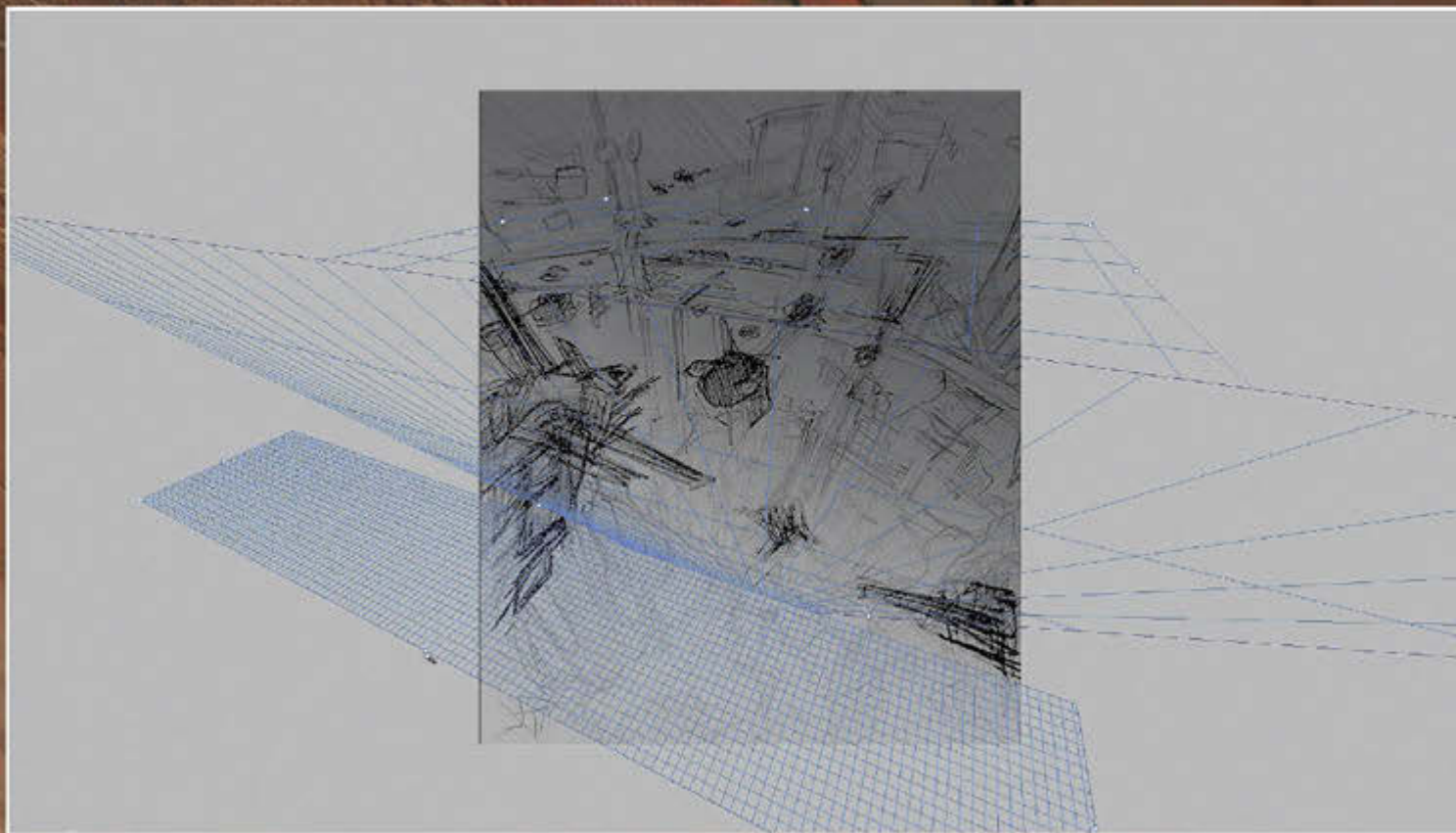


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2 Adding perspective guides

Once the sketch is approved I bring it into Photoshop and drop down a Gradient. Now we'll need some perspective guides. I create a new layer, then open the Filter menu and select the Vanishing Point filter. I draw a plane to define the top of the wall and select the Create Plane Tool again, click-dragging from the side-selector of the first plane to create a perpendicular one (the face of the wall). Once I've adjusted these to my liking, I drag another perpendicular surface outwards for the ground. From the pull-down menu in the upper-left, I check Render Grids To Photoshop and hit Done. Then I lock this layer, desaturate it and set it to Screen at a low Opacity.

PRO SECRETS

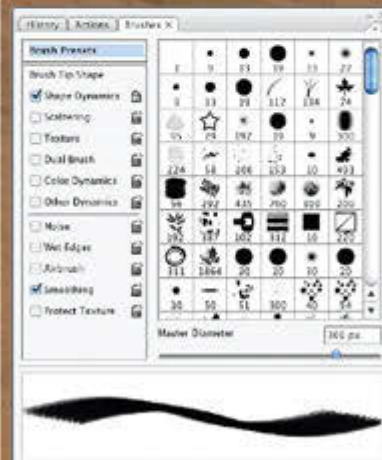
The big picture

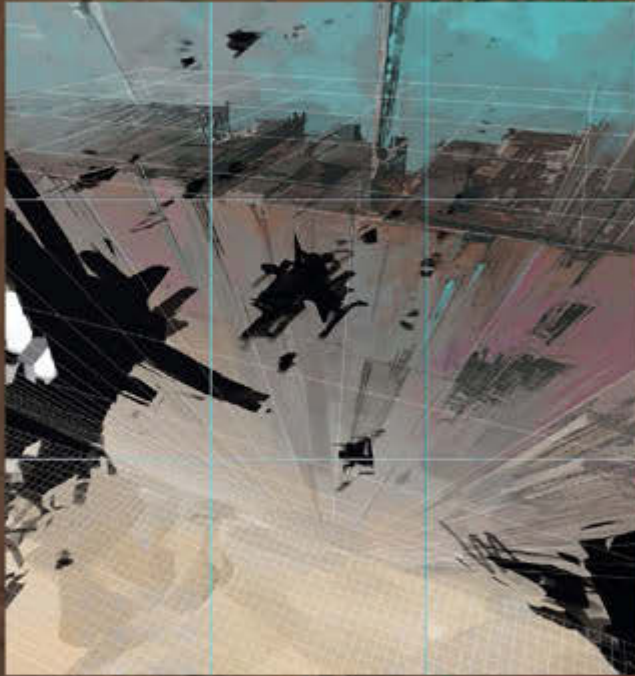
Early on, force yourself to lay down broad strokes from a zoomed-out view. If it looks good from a distance, making it look good up close is a matter of time. Detach the navigator window and enlarge it, to provide a constant view.



3 Blocking out forms

I start blocking shapes in greyscale, working fast and zoomed-out. I've kept my image small – this keeps response time fast and makes me avoid excess detail. I set up a 3x3 grid (Preferences > Guides > Grid > Slices & Count > Gridline every 33.33 per cent) to help composition. For a focal point, I'll have a ship passing through the wall on the upper-right third.



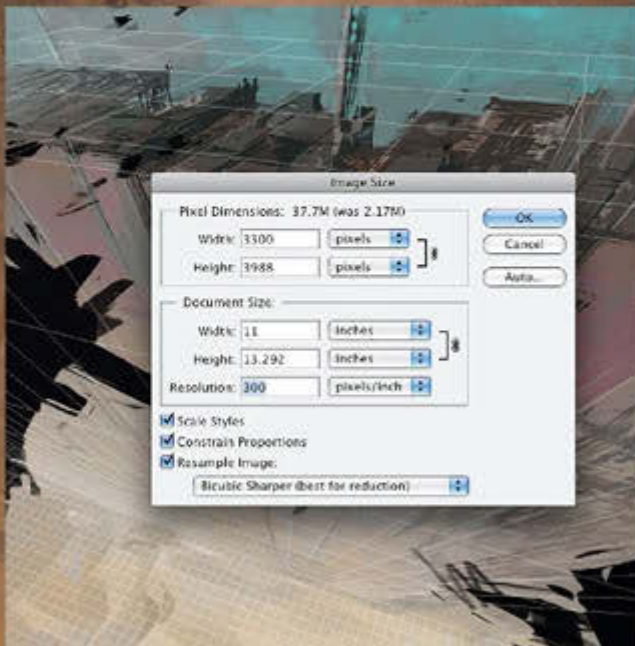


4 Thinking about colour

It's important to work with colour early on. I start a new layer with Blending mode set to Color. I want this wall to look worn and gritty, so I use muted browns and oranges, with some pink mixed in for contrast and a slightly alien feel. Keep atmospheric perspective in mind – scenery further away will be less saturated with lower contrast. I adjust the layer until I'm happy with it, then merge it with the background. Layers are useful, but use too many and you risk losing cohesiveness. That said, I'm keeping the foreground ships on a separate layer since they're clearly separated in space.

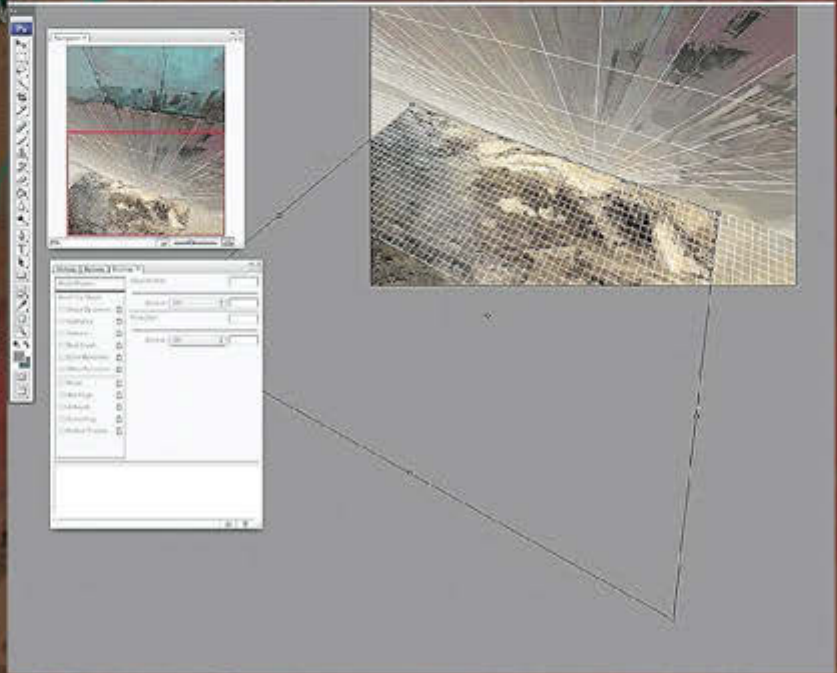
5 Scaling it up

It's time to get more specific. I enlarge the image to its final size – having started at 72dpi, I'll bump it to 300dpi. I add detail and texture to the face of the wall and create a new layer for the shield wall. This will enable me to paint the surface normally and render the shield separately. I start suggesting areas on the wall's surface where its plating is missing and the framework beneath is visible.



6 Establishing the ground plane

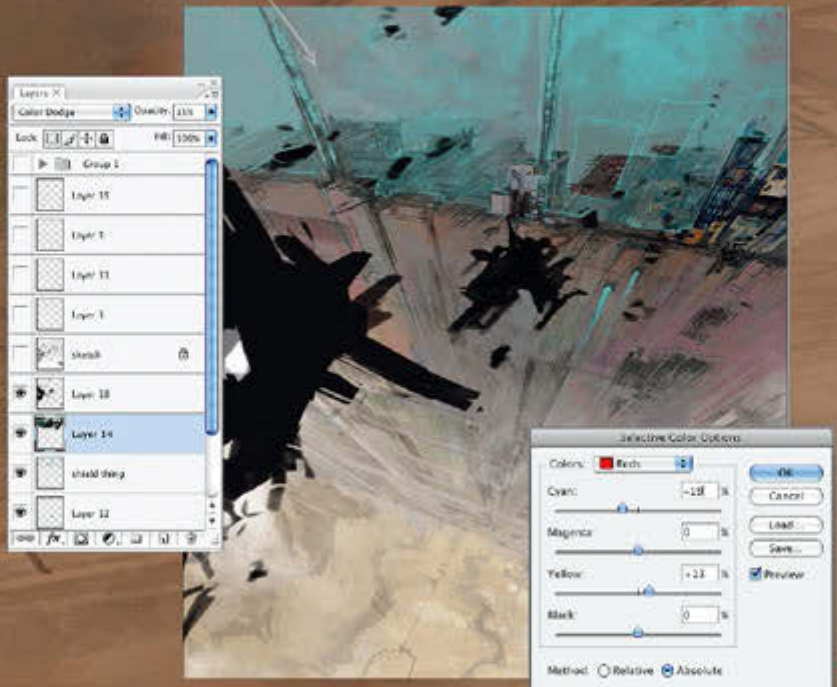
To save some time I bring in an aerial photo so that I can start the ground. Using my perspective grid as a guide, I Free Transform the image into place. I try some blending modes and settle on Soft Light. Now it's just a matter of tweaking and painting over it until I'm happy with the ground's features and level of detail. Next, I grab a Fuzzy brush and add some clouds on a new layer, being careful not to overdo them. I alternate between painting and erasing, chiselling away until the clouds have a shape and texture that I'm happy with.

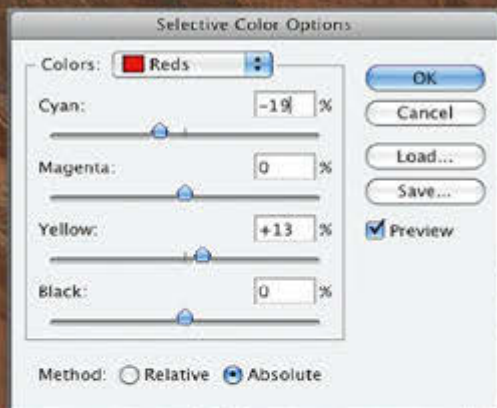


7 Initial adjustments

I continue building up details in the wall and shield, applying a few more photos for texture. I've got the background mostly defined and I need a break. I'll start some Adjustment layers to push the depth and colour of the image. I add a Levels adjustment, then use the

Selective Color adjustment to tweak colour intensity. I bring in a grunge texture and set it to Overlay with a very low Opacity. This adds a subtle grain and unity to the image. I'm happy with these improvements, but I'll Group and Hide these layers for now so I can continue to accurately paint on the layers beneath.





8 Ship design

Back to painting. It's time I did something with these ugly black blobs in the foreground. I want the design of the ships to contrast with the flat industrial construction of the wall, so I keep the shape of the main ship organic and asymmetrical. I use layers more freely here, creating a layer set to Color Dodge to add some engine trail effects. I also create new ships on separate layers, to make it easier to move them around if needed.



9 Composition revisited

I zoom out and evaluate my composition again. Now that the ships are defined, the scene feels too open. I'll add part of another ship in the corner to keep the viewer's eye in the picture. I also spend some time tweaking their placement. The craft feel a little disconnected, so I lightly brush over parts of them with a low Opacity brush set to Clear, so that just a bit of background shows through in places. I then bring some of the background colours into the ships by painting on a new layer set to Color. Now they feel more unified with the rest of the piece.



10 Background details

In the later stages of a painting I like to move frequently between different elements. This helps keep me engaged and stops me getting stuck on any one bit for too long. Now I'll return to the wall and add detail to further its sense of scale. I flip the image horizontally to give a fresh perspective, then bring in some brighter orange and use a simple Custom brush to draw uneven plates, giving the wall a ramshackle feel.



11 Value refinement

We're getting there, but when I zoom out there are things I'm still not happy about. The shield feels flat – I'll fix this with a soft green gradient. The green gives it a shimmering effect and reflects the yellow of the ground. I also repaint parts of the shield to be more accurate as I overdid the atmospheric perspective leading into the ground plane. The brightness of the ground is distracting to the eye, so I darken and desaturate it a bit with another gradient.



12 Focal point

I usually end up forgetting something important. This time it's having a good focal point. As planned, I add a ship passing through the barrier at the upper-right third. To help draw the eye, this ship's engines will be pink instead of blue. Just one splash of bright pink stands out way too much, though, so I add a few more ships with pink engines. Maybe all ships passing through the shield have to throttle back their engines, causing the shift in hue.





13 Embellishments

The ground area is still bothering me. I get rid of the darkening gradient I added earlier and instead cast subtle shadows on the ground to break up the brightness. I also go back to my Adjustment layers and tweak the Levels and Colors again. I'm happier with the balance of the piece now. For fun, I stick some abstract circles on a Color Dodge layer around the edges to add just a bit more visual interest.



PRO SECRETS

Flip the Canvas

If you've been looking at your image too long and are losing your eye for detail, flip it horizontally and anything unbalanced will instantly stand out.

14 Detail, detail, detail

At this point I'm pretty happy with the overall feel of the piece. Because this concept is all about scale though, I need to push the detail as much as I can. Starting with the wall, I add a pattern of lights and define some buildings and scaffolding along the top and side. I also drop some light circles on the ground plane – crop circles, perhaps?

15 Final adjustments

Just a few final tweaks still to perform. I fiddle with the Adjustment Layers some more, paint a couple of extra splashes of orange so that the bright orange of the wall isn't so linear and add a bit of texture to the wing in the lower left. Since I'm in tweak mode, I don't mind using lots of layers to try new adjustments – the painting won't lose any cohesiveness at this point. I also check the image on my other, lower contrast monitor to make sure it still stands up to scrutiny there.



Shortcuts
Eyedropper tool
Alt+click (PC & Mac)
Use this to quickly switch between colours already in your painting, saving time and keeping colour unity.



16 Calling it done

Knowing when to call a painting finished is an art form in itself. With this scene, I could continue adding more detail, but don't want to risk overdoing it. I think I've got a good balance of detail and abstraction and, most importantly, feel I've created the scene I had in mind. Sounds done to me! I hope this workshop has been helpful for depicting fun, dramatic environments.





Painter

PAINT AIR BATTLE CINESCAPES

Ever fancied creating dramatic cinematic scenes like this air fight? **Ryan Church** takes the pilot seat...

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Artist PROFILE

Ryan Church
COUNTRY: US



Ryan is a leading concept artist and a senior art director at

ILM. He was concept design supervisor for Star Wars: Episode III and he also taught entertainment design at California's Art Center College of Design.

www.ryanchurch.com

GET YOUR RESOURCES

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Before beginning a concept sketch or painting for a movie, I usually work with the director and review the script for that particular scene. In the case of this tutorial, the scene is an air battle. To create this illustration two-dimensionally, I begin by researching actual aircraft in order to understand their construction, the main features required for flying, their markings, materials and reflective properties. All this research will help me to create fictional aircraft based on something known and understood, while appearing futuristic.

In this scene, I decide to paint air combat ships fighting across a night sky. In the final composition, the eye will move from left to right with a large aircraft in the foreground contrasting against the light of the background and the rocket exhausts. It will become evident as your eye moves across the frame that a large ship is closing in on a smaller ship, which is itself chasing three other planes farther ahead.

I decide to use smoke and condensation trails (contrails), as well as the light from the rocket ship in the foreground, to move the eye quickly from left to right as the

scene unfolds. It is important in such a composition to have a foreground, a middle ground and a background. In this particular scene, the middle ground depicts large airships in strong one-point perspective. They are placed along the perspective line to draw the eye in and across, and create a sense of depth and space. The background draws you in, so you then see another large airship and some carefully arranged ground details. This is my favourite type of painting – one that faithfully depicts in detail the aircraft's design, but also illustrates the illusion of speed across a motionless frame.

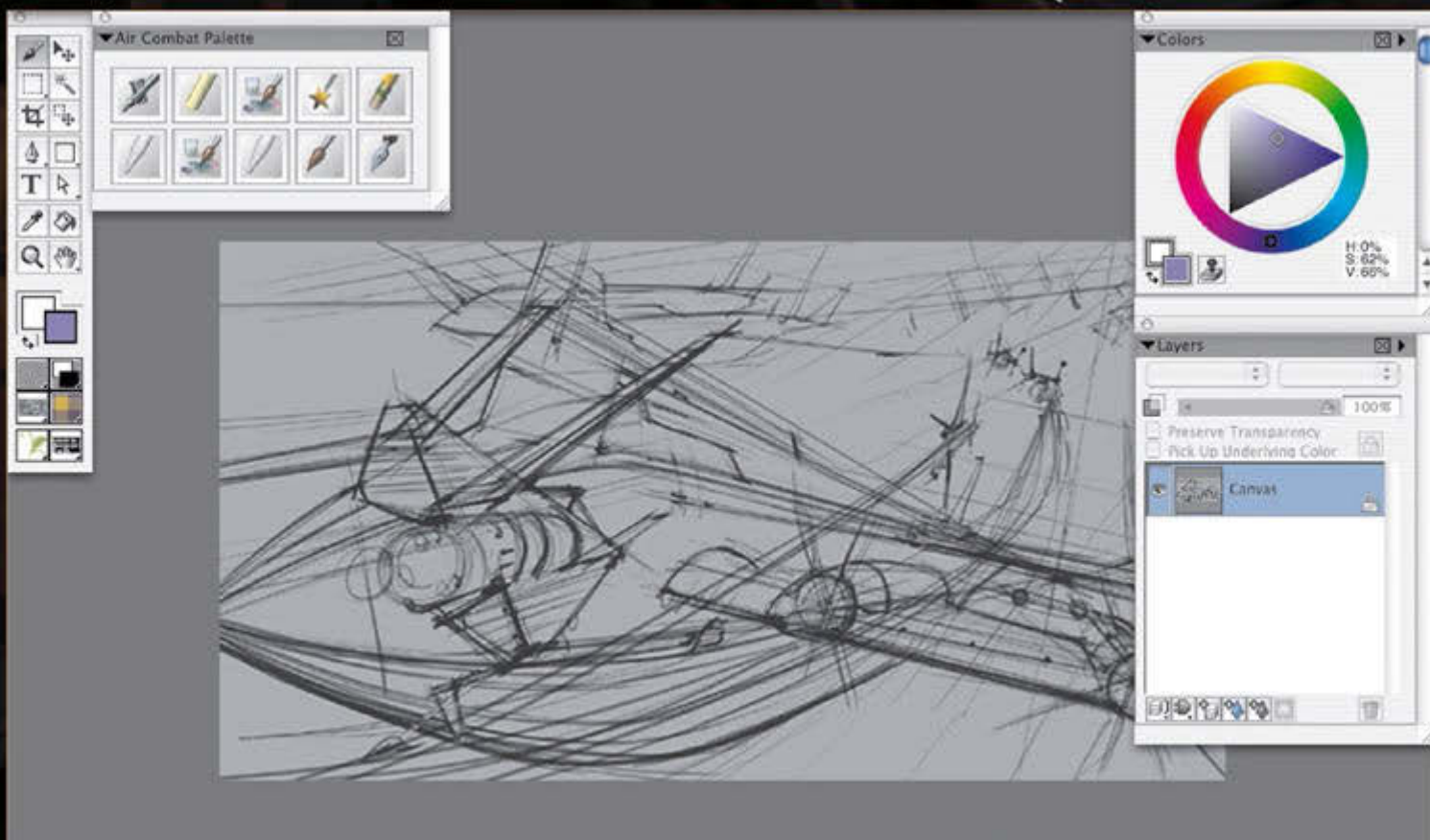
1 Set up the workspace

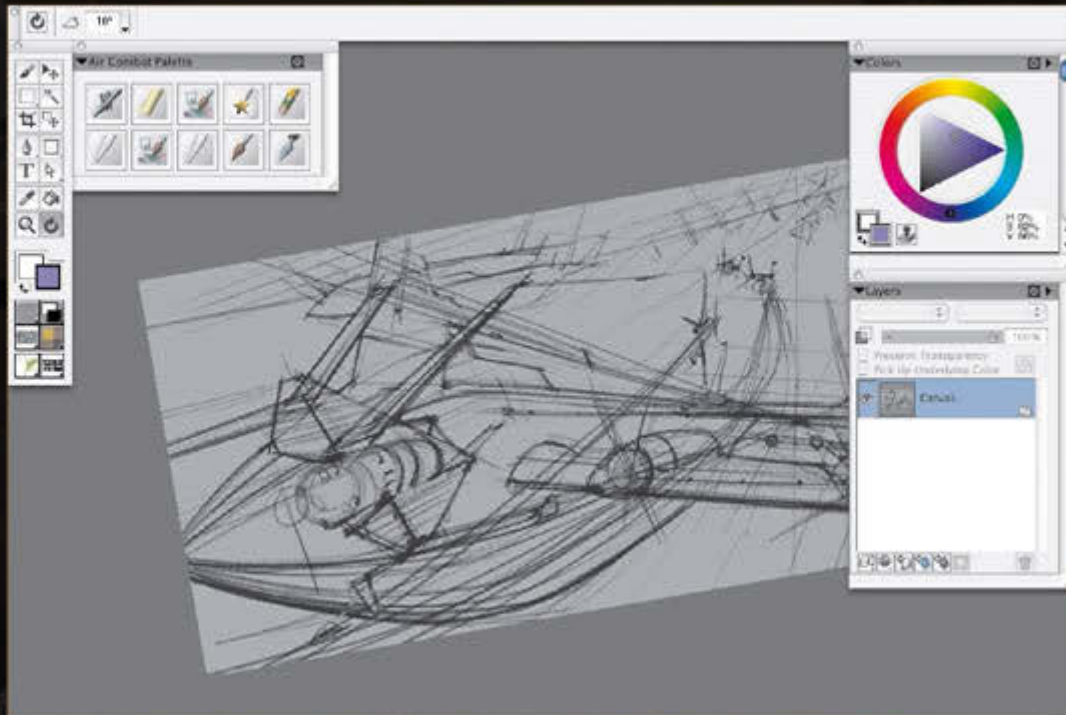
To save on-screen real estate, I set up my workspace with a custom palette so that my tools are easily accessible, while those I won't need, or use rarely, are not in my way. To create a custom palette, just drag a brush variant out of the Brush Selector bar and onto the workspace. I customise my own brush variants, using the Brush Creator and the new Brush Control palettes (Window>Brush Controls) and place them in my custom palette. Using both of these features enables me to streamline my workflow and meet my tight deadlines.

For my custom palette, I choose the following brushes: Digital Airbrush, Square

2 Make a line drawing

Once I have an idea of what the director envisages and how that scene is to play out, I begin a line drawing. This loose black and white drawing will be extremely useful. It will be shared with the photographers and set directors to provide them with a visual of the scene, as well as





the overall feeling, action and mood that the director is attempting to evoke. A line drawing can be a traditional sketch scanned in and imported or a line drawing sketched in and imported in Painter using its Natural Media tools and features. Painter offers many sketching tools to choose from, along with a large variety of paper textures and colours, including among others Artists' Colors – the new default colour set.

I experiment with a few rough sketches first to get a feel of the scene and the objects. I can restart quickly and easily, but in this case I decide that I like one of my initial sketches, so I continue to build it up. I begin my line drawing in Painter. I use a brush or a pen that can switch between a thick and a thin calligraphy line. This gives the same effect as that produced by a real-life artist's pen in a real-life sketchbook. You can find an assortment of pens and brushes in the Brush Selector bar. It's important at this time to establish and anchor your perspective lines. These will help place my subject matter into the composition. With this particular image, the aircraft will be flying through the air quickly, as well as dodging other craft and fighting. The horizon line reflects the angle at which you wish an aircraft to be flying into the scene. It also helps to provide depth of field and the illusion of movement.

3 Rotate the page

I turn my canvas by using the Rotate Page tool in the Toolbox (located in the Grabber flyout) and apply a few light lines across the page where I want my horizon line to be. I skew this horizon line to one side, to suggest dynamic space. In this composition, the horizon will curve from

the lower left to the upper right. I use the Fine Camel 10 brush (Oils brush category) to fill in light lines in varying base colours of blues and greys. It may take a few tries before you get the lines you want where you want them.

Once I have my look, I create a new layer and go over my sketch with a tight line drawing. This helps me nail down the design more accurately. I check my perspective, tighten up the design and create the template on which my painting will be based.

4 Block in the scene

I call the blocking-in stage painting with the lights turned off. I apply a tonal

value to the canvas. With Painter I can alter my canvas colour or tone by applying a colour overlay. To do this I select a colour from my Color palette, and go to Effects>Surface Control>Color Overlay. I choose Uniform Colour from the Using list and leave the default Model at Dye Concentration. Using a mid-toned ground further increases the tonal range of the medium. Whites provide lights and highlights while blues, browns and blacks provide the mid-to-dark and dark tones. The use of toned paper or canvas is a popular technique that was used predominantly between the 16th to the 19th centuries in Europe, so seems appropriate.

Because this aircraft battle scene takes place across the evening sky I want to evoke a particular mood and depth, so I choose a blue-grey tone for the colour overlay. This functions positively as an overall tone for the sky and as a mid-tone for the aircraft. I adjust the opacity to a lower setting so that the lines of my drawing will become visible through the colour.

On a new layer, I begin blocking in colour and tone with translucent media like the Detail airbrush, found in the Airbrushes category. This enables me to preserve my line drawing for as long as possible. For this, I select a colour to act as the base for my aircraft, in blue-grey. Using long calligraphy strokes, I fill in the main objects in my composition. I can then go back in easily with the Eraser to clean up some of the lines. When I have the illustration completely blocked in using translucent media, I begin rendering with opaque media, like Square Chalk, found in the Chalk brush category. By decreasing the Grain on this brush variant, in the General controls of the Brush Creator, I reduce the amount of paper texture showing through.



5 Work up the air ships

I begin working on the aircraft by dropping my previous layer and opening a new one. Given the dramatic and dark nature of this scene, I choose to build up my aircraft using mainly monochromatic colours. At this point I need to decide on a time of day and establish where my light and shadow will fall. Using an airbrush from the Airbrushes category, I create monochromatic gradations from light to dark on the vehicles and the sky, illustrating the highlights and shadows. This begins to give shape and dimension to the painting. I start to establish forms in the background, including a faded cityscape and a few other smaller vehicles.

6 Airbrushing

Once I've built these objects up I open a new layer, choose the colours for each of the vehicles and apply them using the Wash brush. I just want a soft hint of colour, so I use the airbrush to block in large simple values. I begin with the smaller planes and establish their forms using long flowing lines, following the shape of the object. Since this is on a new layer, I can go out of the lines and still go back in and erase without affecting my background.

I complete the basic form, then save and bring up a new layer to begin working on the larger plane that's in the foreground. I find the Glow brush useful for this, because it creates a reflective quality along the top of areas facing the sun and the rocket exhaust. I apply long smooth strokes of graded



colours in reds and yellows to create the fiery effect for the rockets.

7 A dramatic sky

I start work on the background by copying the canvas onto itself. I click Select>All, then Edit>Copy, then Edit>Paste In Place. I lower the opacity by moving the Opacity slider on the Layers palette. This enables me to work in smooth uninterrupted strokes. I go back in with my Eraser over the aircraft without removing my work below. On a new layer, I use the Glow brush to create a gradation of warmer colours in the lighter areas, like oranges, reds and yellows, and cooler colours in the shaded areas, including greys and blues.

For clouds, I use the Square Chalk brush with a basic colour palette consisting of whites, greys and blues. I add some warmer tones, especially reds and yellows, to clouds closer to the light source of the rocket to

give the impression of reflected light. I block in shapes using quick motions. Using this technique, along with Painter's ability to resize the brush directly on the canvas (hold Cmd+Option or Ctrl+Alt, and drag the pen on the canvas), I create a number of contrails. They gradually get smaller, from the planes across the sky, implying movement and speed. I continue creating patterns in the sky, applying light and shade to the clouds, depending on where the light sources hit them.

I need a Blender, like Blur or Diffuse Blur, to smudge the chalk lines and create a more dramatic cloud effect with more shadow and pattern. Using the blending brushes I can push and pull existing colour on the canvas in the same way I would work with traditional oil paints. This creates the realistic painterly effect that clouds have as they fade into the atmosphere.

Once I have established a basic



background that I'm happy with, I use the Detail airbrush to create atmosphere and give shape to the composition. I apply light, fluid motions to the edges of the canvas to provide depth to the lit and shaded areas. Because of the dramatic light source on the left, I decide to add darker gradations on the right and move to lighter colours the closer I get to the light. This helps to push the clouds into the background.

I pause and step back from the painting. Zooming in and out by using a few handy shortcut keys (most usefully Cmd/Ctrl and +, to zoom in, and Cmd/Ctrl and - to zoom out) I can ensure I am not overdoing any one particular area and provide a sense of how the scene is coming along.

I also flip the canvas (Canvas>Rotate Canvas>Flip Canvas Horizontal), to get a mirror image of my painting. These two techniques enable me to check my composition and perspective with new eyes and gain some objectivity.

8 Add more details

When I have built up the overall composition, I drop the layer, open a new one and get to work on the details. This is what I refer to as turning the lights on. I am careful not to overdo any one area, because the objects in the background are more out of focus than those in the foreground. I also look for where there might be reflections in the glass and add details to the wings, weapons and hull area. I collapse the layers and bring up a new layer whenever I move on to something new, like placing in accent colours, for instance. Once I have a good base of colours and details, I use an airbrush to add more shadows, and the Eraser to remove paint, to bring back the layer below. Building up shadows and highlights in this way brings the aircraft to life.

I add in some darker colours around the areas that I'd expect to get a lot of smoke exhaust. We must not forget that this is not

a new vehicle. It needs to look dirty and worn in places, with oil and dust residues built up over many years of flying. There needs to be some oil and dirt around any gun barrel or jet flames, too. The Square Chalk brush is useful for creating this effect, along with an airbrush with a dark blue-black colour.

I continue to build up details, collapsing my previous layer and then creating a new layer with each stage. I use a fine brush to paint the details of the panel lines and paint in some small windows. The panels become smaller at the front of the plane as it is positioned further into the painting. This is where my original perspective lines prove useful. I step back from my image before deciding to tighten any areas that seem messy or need a bit more work.

My final touches are the contrails from the smaller planes flying into the middle ground. They help give perspective to the

aircraft in the foreground, but they also help to lead the eye into the scene. I create a new layer and use the Glow brush for this. I try a few different streaks across the sky to see which one works best. By creating a new layer before doing this I can make a few attempts without affecting the layer below. Once I like the effect, I drop the layer.

I check to see if I need to go back in and warm up some of the clouds and work them up a bit more in order to balance the finished image. Adding more contrast gives the scene a more cinematic effect. When I feel like I have achieved a balanced dramatic effect, I step away from my finished piece. ■



Photoshop LIGHT YOUR OWN WORLD

Ioan Dumitrescu shows how to light a night-time sci-fi cityscape and use light to shape worlds

Artist PROFILE

Ioan Dumitrescu
COUNTRY: Romania



Known as Jonone to the sci-fi and fantasy art community,

Ioan works as a freelance illustrator and concept artist.
<http://ifxm.ag/ioan-d>

GET YOUR RESOURCES
See page 226 now!

Before I start working on an image I make a conscious decision to put aside any fear of failure and let the joy of imagining wonderful worlds take over. In this tutorial we're talking about how to light an image, and what could be better than a cityscape at night? Full of neons, headlights and all kinds of other lights interacting with different surfaces, unveiling some shapes and hiding others.

Before I start out, I ask myself questions that can inspire my painting. For example, what word best describes big cities at night? Contrast. So that's what I'm looking for here – relating colour, mood and organic shapes. The work shows that

this city doesn't sleep, that it's more alive at night than it is during the day. I'm going to use light as a design element and in a way that hopefully creates some drama. At the early stages I'm not sure quite what the scene will look like, although I have an idea of some kind of hanging bus station, with a hybrid of a maglev and a bus.

In this workshop we'll look at the use of different types of artificial light in order to confer atmosphere in an illustration, but also to model and design. I'll use a standard Round brush for this workshop, with Opacity/Flow Jitter set to Pen Pressure and the Spacing to 0. But I often use Mathias Verhasselt's brushes too.

1 Points of reference

The first step in every illustration is the concept art. I start searching for reference – in this case I look for major city streets just to see how artificial light works and interacts. I pull the shots together into Photoshop and blur my eyes a bit to see if any images pop into my head. I select a few images that I like and play around with the colours to see if there's anything worth exploring.



2 Composition

I really like some of the blueish tones from my reference points, so I start sketching things out roughly. I usually like to do a monochromatic study first, but this time, in the spirit of throwing caution to the wind, I just jumped into things. First I need to find a suitable composition, without committing to anything. I start pulling out reference images I think might integrate well and try using them to shape things out, erasing and painting over and over again. Even at this early stage make sure that you save, as a crash can ruin a potentially fruitful train of thought. The next step is to start putting light in – just punchy saturated colours (I can desaturate later). I decide that the perspective points will also be focal points (one of the oldest tricks in the book), so I start lighting them. I choose a cooler blueish tone for the outside and a soft purple for the inside, just to differentiate the areas.





3 On the buses

The interior space leads out to the deck of the bus station where commuters wait for something that sort of resembles a double-decker bus. The bus station is made out of transparent glass, with all kinds of light fixtures hitting the scene from underneath. It's nice eye candy for the viewer, but it will also help define the people standing there later on. Always try putting dark against light for contrast in your areas of interest. At this stage I'm a bit overwhelmed by the background and middle ground. It still looks like there's a lot to be figured out. I put an array of lights in the background to help with the atmospheric perspective, and also make the foreground bus appear more visible. ➔



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PRO SECRETS

Take a step back

Try to look at your image with fresh eyes, either by leaving it alone until the next day, or by working on another project. You'll find all the little mistakes that you couldn't see before and be able to correct them.

4 Fleshing out details

I circle the bus to make the viewer go back and forth between the foreground oval shape of the station roof and the bus. I flesh out the matchstick men walking about to make them resemble human beings. I know the guy sitting on the edge will be hit by a lot of direct light from the bus, so I expose that part a lot, then rim-light him from the floor, and ambient-light him from the structure. I then add some futuristic nuns staring at an invisible hologram that I'll add later.



6 Flip-reverse it

Always remember to check your image by flipping it horizontally. No need for mirrors here, just go to Image>Rotate Canvas>Flip Horizontally. You can check your perspective, composition and values this way, as your eye might have become used to any mistakes that have snuck in.

7 A city brought to light

Still working with saturated colours I start painting the city. I think I'm going to avoid over-detailing it. The viewer has enough things to look at, so I just use the advertisements and the light they make – more as a graphic for the composition. I start blocking out more of the bus using direct and rim light from the surrounding neon advertisements. I make sure that the lights in the background all reach maximum intensity behind and around the bus. I also move ships that I created early on in my sketching around the scene, to fit them in.



Shortcuts

Create a new layer

Shift+Ctrl+N (PC)

Shift+Cmd+N (Mac)

Hitting this shortcut enables you to create a new layer in situ.



5 Holograms and neons

Next I border the deck using some long neons to separate the foreground and middle ground. It's good to add glow to powerful lights, as that's the way your eyes perceive them in real life. I add the nuns' hologram, bathing them in light. For the writing, I use some reference, and play around with Layer modes until it works (try Screen or Overlay). For added realism I make an underlying layer to show the hologram and have volumetric light emanating from it.

8 Retaining focus

I keep on bringing in reference, playing with layers to get the blacks out and keep the light. I erase and paint-over until I'm happy with the results. I don't want the viewer's eyes to fall off the page in the lower left-hand corner, so I bring in a traffic light. This in turn makes the left-hand corner look like it needs more depth.

9 Glow layers

I continue adding lights, keeping it loose and messy adding layer upon layer of painted underlaying and text. Adding the reference over what I call a Glow layer helps integrate the advertisements into the scene. I have to break the stair surface a bit and put in some reflections from the light fixture in the shop above. Don't be afraid to experiment with crazy colours or shapes in your own work, you can always tone them down later. Take full advantage of your imagination.





10 Happy accidents

In a lucky mistake I move one of the foreground layers and see a pillar holding the hologram for the nuns. Just what it needs. It's good to not be too committed to what you've already done. If something else works better, then by all means use it. I also worked a bit on the traffic light, which I connected to the structure, helping to give it a more organic feel. As mentioned, it needs a bit more depth so I bring in another bus line on the left side of the image, which is another opportunity to use some volumetric light coming from its headlights to show off what's in front of it.

11 Light touches

The painting really feels like it's coming together now and it's time for some finishing touches. Primarily I make sure that light hits the objects it's supposed to hit, thus integrating things well. I also try to place them better to certain anchor points. I've changed the old ships, scaling them to better give size and depth, also causing them to catch the surrounding lights. Finally I give the green light to the racing buses.



12 Fight for the right

The right side has been neglected, so I bring in some adverts in this area. I immediately have to tone these down as they're a bit too eye-catching. To place them I make their reflection into the building. I also reflect them into the glass flooring of the deck, along with the people standing there. I darken up the corners, avoiding any distraction from the lights there and better leading the eye inwards.

Shortcuts

Select layer items

Ctrl+click (PC)

Cmd+click (Mac)

This shortcut enables you to select what's inside a layer.



PRO SECRETS

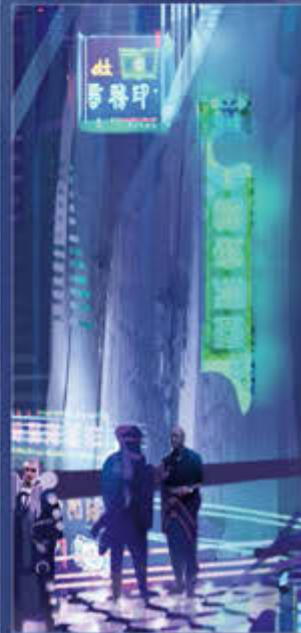
Muck it up

If you're not making any mistakes it means you're not working hard enough! Experiment with things that you don't normally do and you'll learn a lot more.

13 Adding contrast

I add more atmospheric perspective and dramatic lights while raising the contrast a bit to suggest that there's a lot more going on behind the bus, and making the viewer want more. I'm not shy on using Color Balance to integrate

things, and because I want some colour diversity, I make the adverts on the right-hand side a little more cyan green to get away from the blue. Along the way I used different colours for the glows. Don't be scared to use more than two colours – as long as you're careful, they can work nicely with each other, or you can use them to create contrast.



14 Final blooms

Nearly there. I rotate it one last time and expect the worse. Thankfully it's not that bad. I apply the final touches here and there, trying to find the right balance between finished and unfinished areas of the illustration – but I choose to stop here. After a couple of sketches I found my direction, and by the final image I've hopefully got the idea across.

Photoshop

PAINTING AN URBAN FUTURESCAPE

Learn how to create an environment from scratch and develop an idea into a concept piece, with **Alex Broeckel** ➤





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Artist PROFILE

Alex Broeckel

COUNTRY: Germany



With over 16 years' experience as a professional 3D artist, Alex

specialises in building and lighting digital environments for the entertainment industry. He's worked as a lighting TD on films including the third Harry Potter and Oliver Twist.

www.alexbroeckel.com



GET YOUR RESOURCES

See page 226 now!

PRO SECRETS

Adjustment Layer

Always keep a deactivated black-and-white Adjustment Layer on top of all your other layers. Switch it on from time to time to see your work in values only, and check if it still reads well. If it doesn't look good in black-and-white, then it probably won't work in colour either.

Painting an environment or landscape without an initial idea can be fun, but it's not something I often do. Most of the time, perspective, colours, mood and basic composition already exist in my mind before I begin an image. This gets the job done faster and avoids repainting.

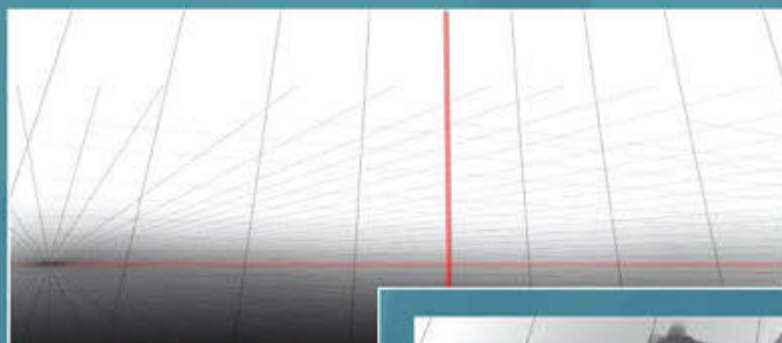
But when I'm not in a hurry and there's no need to follow a specific topic or brief,

I like to let the image develop itself during the painting process. This means this process can sometimes become chaotic, which isn't so bad as long as you follow some rules to make your life easier.

With this speed painting, I want to show you how I develop the idea of the image while I'm creating it. At this moment I don't have any further idea about the painting I'm going to work

on, except that it will show an area somewhere in a futuristic city and may well show this from ground level.

Because I'm starting without a fully formed idea, I don't spend much time finding references and inspiration for my painting. Of course, this doesn't mean that I can't collect some reference material later on, once I know more about my chosen topic.

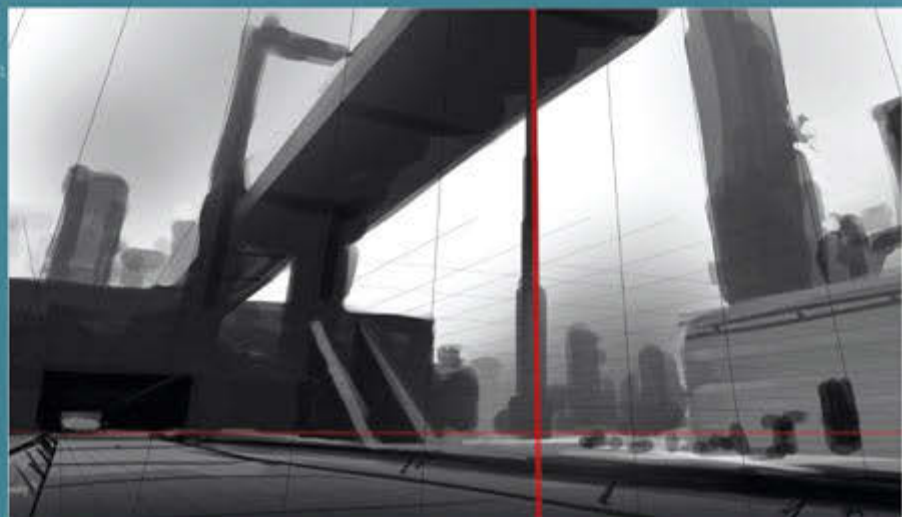


2 Blocking in the scene

Now it's time to develop the basic composition and layout. Using a simple hard, round brush with pressure sensitivity set to Opacity, I start to paint and erase with shades of grey to block in some structures until I like the outcome.

As you can see, I'm already thinking about depth as I block in my forms, using lighter greys for distant objects and darker greys for closer objects. Following the perspective grid is essential.

Since this is a speed painting, I put everything on one layer. I can live with it since I know this is just a concept, and the result won't be very detailed and clean.



4 Basic lighting

I ask myself how I could support this concept with some lighting. I take my black-and-white image and start adding some light from the sun coming in from the left side – still in black-and-white. Since value is more important to the human eye than colour, I concentrate on making the image read well.

Because my foreground building is almost leaving the image, I try to bring the viewer's attention back to it by placing some interesting shadows at the front.

1 Perspective

The first step in my process is to load up an Illustrator file, which I use almost all the time. It's a simple grid for one-point perspective. I import it as a vector graphic and duplicate it twice, then move, size and rotate it to form a three-point perspective grid. I also add a simple black-and-white gradient to give myself some hint of depth.

3 Refining the idea

At this point I still don't know exactly what I want to paint. I'm thinking of moving the building on the right-hand side closer to the middle to make it more important, which leads me to my first idea for this painting – what if the building stays there, almost pressed at the border of the image? It would make it look very insignificant. This is where the idea starts to shape up. There will be a contrast between life on the upper levels and the world on the ground.

Shortcuts

Background

Cmd+Backspace (Mac)

Ctrl+Backspace (PC)

Use this shortcut to fill a layer with the colour of the currently selected background.



6 Adding colours

Now that I've got a basic idea of what I want to paint, it's time to add colour. I create a new layer on top and set its Blend mode to Overlay. This enables me to add colour on top of my black-and-white image without changing the brightness values of the underlying layer.

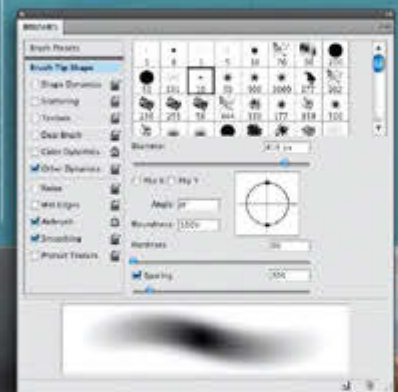
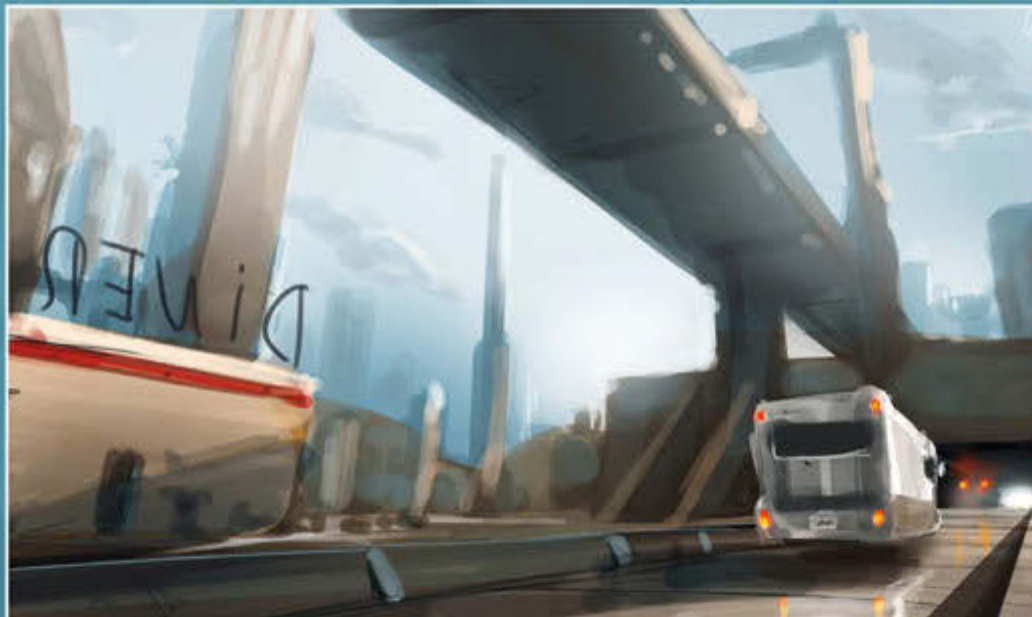
I use a simple cold sky/warm ground colour scheme and block in basic hues. I know it will be hard work to make the diner as interesting as the rest of the image because of its position, so I decide to use strong colours and lighting effects here to make it pop to the viewers eye.

At this point I normally merge this layer with the black-and-white one below – too many layers are slowing me down.



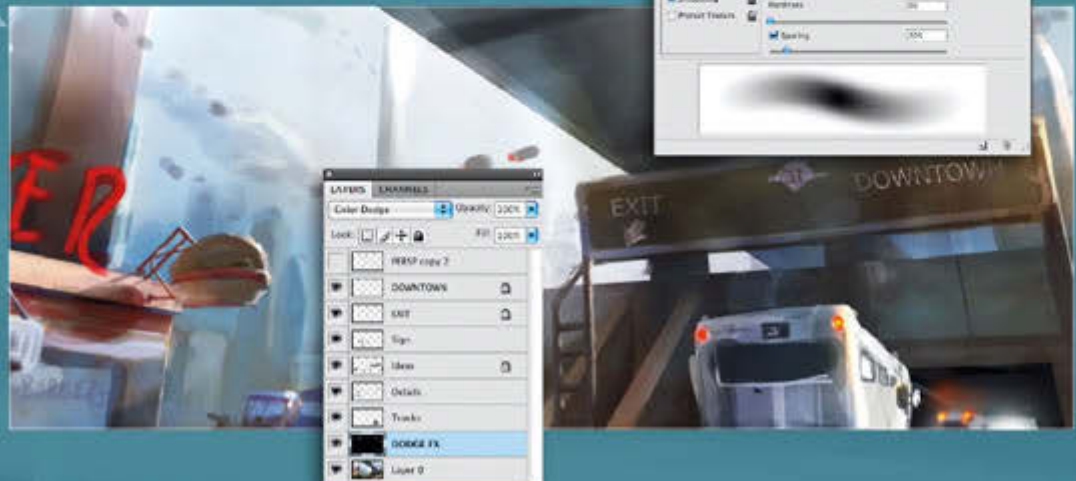
7 Flipping the image

Now that there are basic lighting and colours in my painting, I wonder why I'm so unhappy with it. My first thought is that there may be something wrong with the perspective. A good way to check perspective issues is to flip the image horizontally, so I flip my painting. When I see the result, I don't notice any major perspective problems, and it also looks much more interesting to me in its flipped state, so I keep it like that.



8 Color Dodge layer

After adding more details I decide I want the skyscrapers at the back to become a bit more prominent. I want to give them strong highlights on their surfaces to support the intense sunlight character of the scene. Because I almost always end up reducing the highlights later, I add them on an extra layer. To do this, I create a new layer over my skyscrapers and set its Blend mode to Color Dodge. To make the Color Dodge work correctly I fill the layer completely with black before painting in white highlights with a soft round brush, set to low Opacity.





9 Vibrant colours

Before adding too much detail, I want the colours to look right. It's easy to change them now, but it will be harder as I add detail. I ask myself what I don't like about the colours. I decide that they feel too dull.

A useful trick to get some more vibrancy into the painting is to make a new layer and fill it with a coloured pattern. In this case, it's a concrete texture with its saturation pumped up. This layer needs to be placed on top of all the others,



with its Blend mode set to Soft Light and maybe some reduced layer opacity. I erase parts of this layer to remove areas that are distracting. The texture is there to give some colour variance and more vibrant hues, not to catch the viewer's attention.



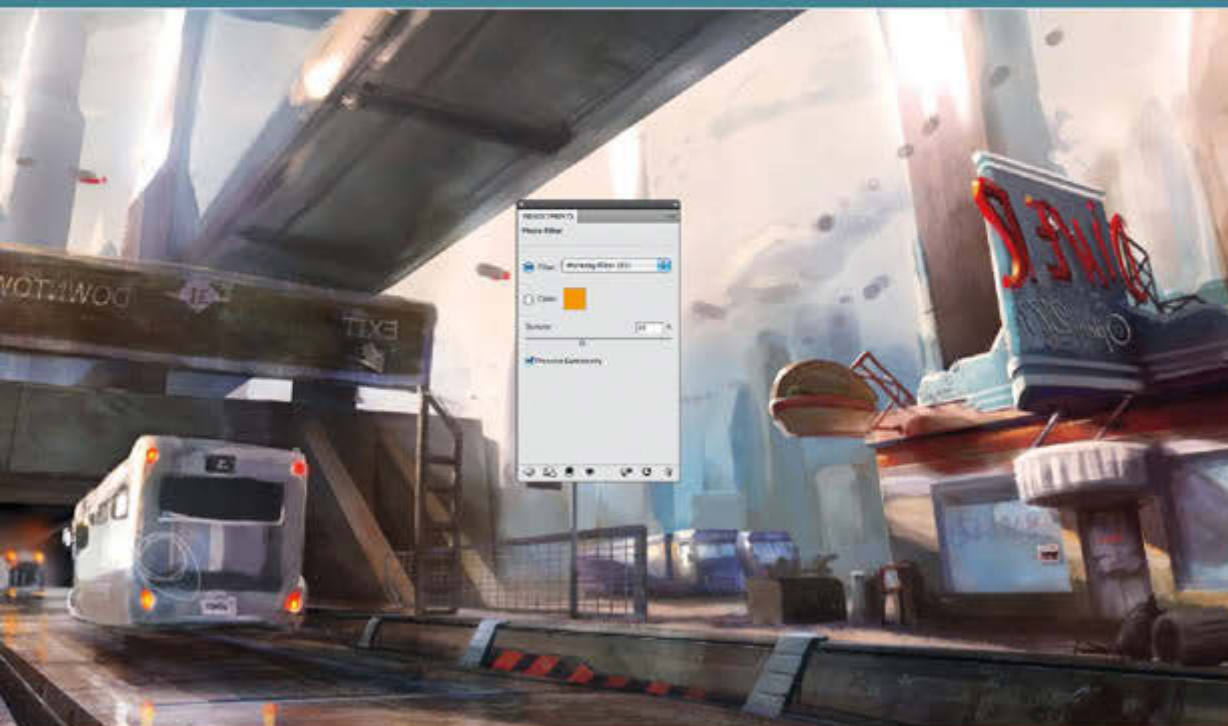
10 Lasso tool details

I will spend the next few steps cleaning up existing edges with the Lasso tool and adding more details, while painting and refining the idea and the lighting. I try to keep balance in the picture by not detailing too much in one area, leaving the other parts unrefined – but there's one exception. I've already decided that this image isn't about the buildings in the distant background, so I more or less stop detailing them. My focus is on the foreground.

11 Texture overlays

I flip the image again to refresh my senses – staring too long at the same picture can make you blind to important issues.

Now it's time to add some textures here and there to make some of the flat surfaces more appealing. I use the trick described in step 8 by creating a new layer on top – but this time, I select areas I want to fill with the texture and erase parts I don't like. I keep erasing the texture until it looks like smudges on the surfaces.



12 Mood adjustment

When I look at the painting now I feel that the angle of the sunlight looks like evening, but the colour of the sky doesn't show that. I also notice that the whole image is broken into two parts, which I don't like. I place a Photo Filter Adjustment Layer on top of all the other layers and choose some warm colours for this effect. The Photo Filter adjustment is affecting the foreground too much, so I create a Layer Mask for it and use black to paint out the parts that shouldn't be affected until I like the colour balance.

Shortcuts

Lock layer
/ (numeric keypad,
PC & Mac)

Use this to lock a layer's transparency – handy for painting over only that layer's contents.

13 Colour vibrancy

Now that the colour of the background is closer to that of the foreground I want to push the foreground hues a bit more. I set a soft round brush to Soft Light mode, choose a strong, saturated orange colour and paint over the highway sign to push those colours a bit. This also suggests a kind of lens flare effect from the sunlight.

I also change the sunlight on the storefront to brighter, more saturated colours to make the storefront pop into the foreground.



14 More details

The area in front of the diner is still too empty and unimportant for my taste. Although I decided in the beginning that I wanted it to be placed on the edge of the frame, I don't really want it to be too

insignificant as a result, so I paint in more and more details to add to the effect.

Since this is a concept painting, I almost always use Hard and Soft round brushes – no fancy special brushes.



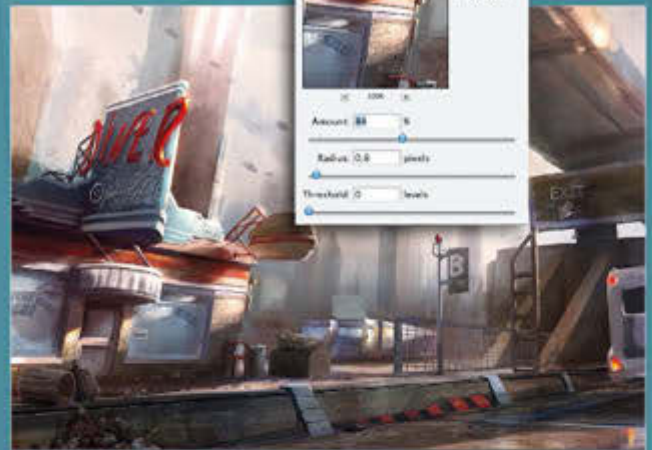
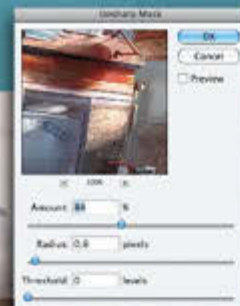
15 Wall texture

I decide it couldn't hurt to draw even more attention to the diner by placing some brick textures on top of the flat surfaces. I do this by creating a new layer and adding a black-and-white brick texture from my 3D texture libraries on top of the surfaces. After deleting the blank spaces between the gaps, I select the black parts and transform them into the correct perspective until the lines of the bricks align to the edges of the wall. I then clear the selection and lock the layer. Now I paint over the brick layer, adjusting its colours to match the walls.

PRO SECRETS

Navigator window

Always keep an eye on your Navigator window. Looking at the image at a small size helps you find problems. When your image is still in a rough state, it helps you to keep seeing the big picture. First make it look good and readable in the Navigator, then worry about details.



16 Unsharp Mask

I could spend many more hours on this, but it already works and the amount of detail is enough for a concept painting. As a final step I merge all the layers and resize the image to my target resolution. Don't forget to keep an unmerged version at its original size so you can revisit it.

To improve its overall look, I apply Unsharp Mask with very low values. This boosts edges and little details and makes a painted image appear crisper. But overusing it can make unimportant parts of your image stand out too much.

Artist PROFILE
Leong Wan Kok
COUNTRY: Malaysia



Kok is a full-time illustrator, specialising in character

design and illustration. His work can be seen in a variety of media, including art print, illustration, posters and comics. He has worked for clients including King Comics and Spicy Horse.

www.1000tentacles.com



GET YOUR RESOURCES

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Photoshop

PAINTING NEW WORLDS

Leong Wan Kok shows you how to use great texturing techniques while painting a far away land...

In this workshop I'm going to share some of the image techniques I've picked up in 16 years working as a professional artist, focusing on texture and colour. This workshop is divided into five main sections: brainstorming; preparing your canvas for colouring; colouring, from inside out; texturing; and the final touch up.

As always it is vital to know what your artistic direction is prior to

starting work on your painting.

What kind of style, design element, the canvas size, final output file format and so on. These are essential. If you have not received any brief from your art director, make sure you ask!

If this is a personal project, I strongly advise you to work out a fictional brief, as this helps you get yourself into good working practices.





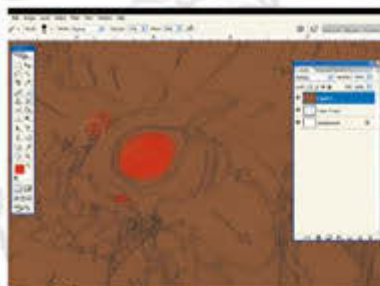
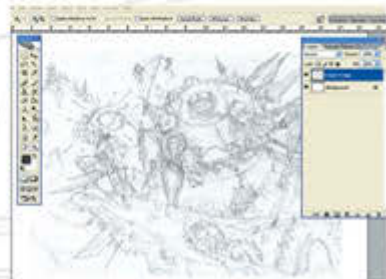


1 Brainstorming

Read the design brief carefully. Design your character and roughly work out some thumbnails – rough and fast. They don't need to be neat at this point. Get the overall feel for it. If time permits, develop your characters. Think of the environment they dwell in, what kind of climate is it, what clothing do they wear? What are their characteristics? Consider these questions and slowly you will start to feel for your painting. I believe this will make the painting more interesting.

2 Scan your image

Once the layout is done, scan it in. Usually I go with 300dpi, greyscale. I opt for this because it gives certain touch to the pencil outline. Open the scanned file in Photoshop and make sure the pencil layer is set to Normal.



3 Colouring, from inside out

I convert the file to CMYK, as per the brief for this project. Do not flatten the layer when prompted. On top of the layer, create a new one. Choose Paint Bucket [G] and fill the whole canvas with a suitable dark colour. Here I go with warm brown for the base coat. Set the layer to Multiply so that the pencil layer is still visible underneath, making it easy for you to use for reference. My personal preference is to start colouring the characters first, then the background, which I like to think of as an inside out method. This enables me to judge the relation of the colours more precisely. Constantly change your brush's Opacity. I like to work somewhere around 20 to 50 per cent, with Flow set to 68 per cent. This builds up the colour nicely.



4 More layers

Make full use of Photoshop's layers. This is most advisable as you can always return to that layer and make changes if you need to. Bear in mind that the more layers you have, the heavier the file will be. You need to balance it out, and sometimes merge selected layers (Ctrl/Cmd+E). Change the brush size by exploring the brush list and change the diameter with] increasing and [decreasing. Remember to save your files constantly.

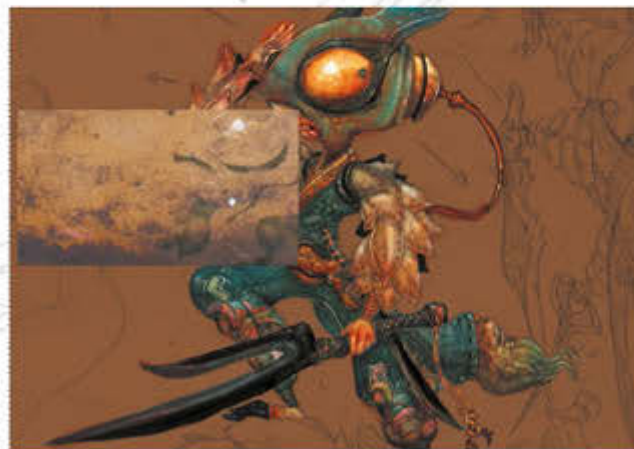
5 Texture mapping

This is one of the fun parts and a challenging process. To give the painting a unique rusted look I choose a rusted metal texture as my base. Open a new layer, paste the texture in and set the layer mode to Multiply. Decide where you want to map the texture. Move and scale the texture to the right size. Make sure the texture size is relative to the painting or else it will look out of place. Delete the areas you do not need from the texture. Once nicely mapped, change the texture's Opacity, and adjust the Brightness/Contrast of the texture. Erase the hard edges of the texture by using the Eraser tool. But, overall, make sure it looks subtle and merges well with the painting.

PRO SECRETS

The Navigator

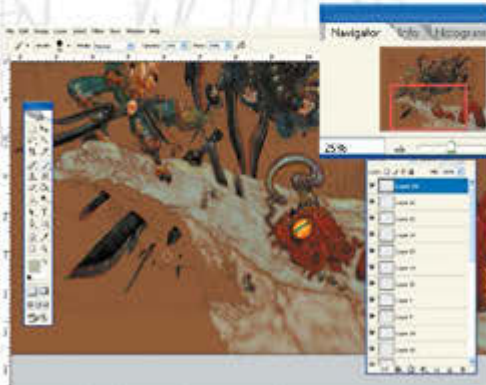
Always have the Navigator shown beside your work in Photoshop. (Window>Navigator if it's not already showing when you launch the program. When you work on your painting, you will constantly want to know how the whole image looks, so you can judge such things as colour combination and proportions. The Navigator makes it easier for you to do this without constantly having to zoom in and out.





9 Keep focused

The painting seems close to complete, but is actually far from it. Maintain your patience. I know when the painting is nearing completion, it's sometimes tempting to rush it a bit. But refrain from that! You've come a long way with your painting and it would be a shame to spoil it by rushing at this late stage. So keep your patience and stay focused. It's good to always have the Navigator open in your scenes at this stage (see the Pro Secret, opposite).



10 Final touch up

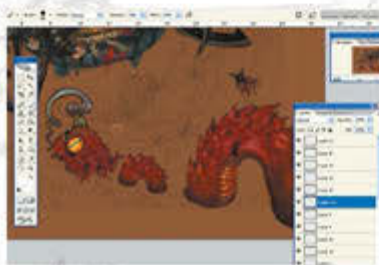
Step back and take a look at your painting from afar. Half close your eyes to view the colour combination again. Look for areas where the colour is popping out. Fix any problems you see. Detail is the key factor here. Adjust the colour for the last time. Hit Tab to close all the palettes. Take a good look at your image. If it makes you smile you know you have yourself a nice artwork that you can be proud of.

6 Colour expansion

I usually keep on painting one character until it's done. I feel comfortable seeing the characters take shape one by one. This is my preference. Now I'm moving on to the second character. I create a new layer to paint on, then toggle between Normal and Multiply layer modes. For the shadows I go for Multiply, and for detail and new colouring I go for Normal. Try these out and you will get the feel of it.

7 Texture mapping, again

For a new texture, follow the same process you did in step 5. It's important to remember that subtlety is the keyword. The texture is here to enhance, not to overpower the whole painting. Don't make it look too strong or introduce too many texture maps. It will make the painting look congested and stifling. Balance is the art here. If you need to, make colour adjustments to the texture map, use Curves, Color Balance, Hue/Saturation and Brightness/Contrast. Make the original texture look flat by erasing the lighting and shadow on it before mapping.



8 Decoration and accessories

A nice painting consists not only of catchy character design, focal points and a good composition, but also introduces small elements and details. These will definitely spice up the work. Add some supporting characters here and there. Make it fun!

PRO SECRETS

Using full screen mode

As you come towards the end of your painting process, it's a good idea to close all your windows except your painting and turn it to full screen mode (by hitting F). By getting rid of any other distractions on your desktop, it's easy to spot any mistakes in your painting, such as poor colour choice. This is a good idea if you feel your painting has a problem, but you can't identify what it is exactly.



ArtRage

OLD-SCHOOL SCI-FI PAINTING

Create a digital landscape that captures the feel of classic sci-fi cover art using basic painting techniques. **Bill Corbett** shows you how

If you've ever seen the glorious cover art of the old science fiction pulp magazines, or you've admired the work of artists like Josh Kirby or Rodney Matthews, you'll have an idea of what I'm going to try to achieve.

I'll be working from the initial concept to the finished render step-by-step, and will only be using the basic tools available

in ArtRage. For another insight into the creation process I'll also discuss some of the initial conception.

By the many stages of this workshop you'll see how things develop and change, and learn my spontaneous approach to this type of painting.

There's no cut and paste and very little Ctrl+Z needed, so I correct mistakes by erasing or painting over them. I won't be

Artist PROFILE

Bill Corbett
COUNTRY: England



Bill has been drawing and painting since he was 10. In his spare time he works as a freelance artist and has produced artwork for games, music, books, CD media, magazines and online communities.
www.billcorbett.co.uk

GET YOUR RESOURCES
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using any references other than my initial thumbnail sketch, so there will be a lot of room for individual expression. If you feel more comfortable sourcing references for certain aspects, do so, but try to integrate them with a loose approach to painting.

There's no requirement to use ArtRage – you can follow with any paint package. The only requirement is a willingness to experiment and have fun painting. Enjoy!

1 Conception

To begin with I spend some time studying artworks from the classic pulp magazines like *Astounding*, *Analog* and *Epic*. This gives me a feel for the types of compositions used to make the paintings interesting, and helps me find common compositional themes – things that give a sense of the past, but that don't necessarily belong to any one era.



2 Thumbnails

With these ideas in mind I narrow down a few thumbnail sketches to the most interesting and relevant one. The thumbnail for our painting is based on the idea of exploration. It draws from stories of lost civilizations, but has a distinct off-world feeling with its central point of interest. The composition plan is to bring focus to the mid-ground monument and set a stage for our intrepid explorers. To start, I open a new canvas with a neutral colour, avoiding white.



3 Colours down

I select the Roller Brush and make it as big as I can, then use a deep crimson from the Color Picker and work from dark to light to just above half way up. I desaturate a rich orange hue by dragging the picker to the bottom-right corner and work it from midway to the bottom of the canvas, increasing saturation as I go.



4 Body paint

The Paint Tube tool is great for giving the paint more body. I squirt on lines of crimson, red and desaturated orange, then use the Palette Knife at 100 per cent to spread the paint around the canvas's top half, keeping it loose, with light blends. It's a good idea to let the strokes go in one direction at this stage. Once the sky is roughly blended, I switch to the Paintbrush sized at 60 per cent. ➡➡





5 Filling in

I block in the rock formations using reddish browns in the foreground, and lighter browns for those further back. It's good to keep the strokes loose and bold and the brush Auto Dry and Clean. For the sandy areas, I alternate between subdued orange and yellow hues. Don't paint too light or it won't contrast well when pulling out the rock details later – just keep more saturated hues nearer to the bottom. I paint loose, varied directional strokes and avoid green and blue hues.



6 Blending out roughness

By now the painting should have all the basic shapes down, so it's time to switch to the Palette Knife and blend some of the roughness out. I set the Palette Knife to 50 per cent and loosely blend the sky in a horizontal pattern, varying the angle of the stroke where I can build up a cloud-like atmosphere. I'll do the same for the areas that will eventually become sand or open space. Don't over blend, and try to keep a balance between roughness and smoothness – even if you have to paint back into the blended areas.

PRO SECRETS

Tube texture

Create a new layer and use the Paint Tube to paint onto it. Switch to a small Palette Knife and cut into the paint. Use a Pencil or the Eraser Brush to break the texture up further. Position the layer over an area of foliage and merge the layer for added effect.

7 Adding depth

To add depth, I create a new layer and switch to the Brush tool. Next I paint a low saturated hue of orange at the horizon and above, drop the layer's opacity to around 50 per cent and paint up with darker, complementary colours (orange, red to violet). I blend lightly with the Palette Knife, then drop the layer. Now I make another new layer and paint in the rock ledge. I'll merge layers when satisfied. If you need more distance, create some atmospheric dust and cloud – just remember where the light is coming from.



8 Levels of detail

As a general rule for painting rocks, think of them as edges that catch varying degrees of light. I start by blocking in the random ledge patterns at a low contrast for the acute angles, before introducing lighter hues at the angles more perpendicular to the light source. When doing this you have to keep in mind that the distant objects will be less saturated in colour because of the atmospheric conditions present. Don't make background rocks overly defined or colourful. I remember to detail the sky a little more too, but also keep my strokes more subtle and blended in that area.

9 Refine

Once there's a balance to my colours I use the Color Dropper to grab the ones I want from the canvas and avoid using the Color Picker. It will help with the consistency of the painting.

Now I'll concentrate on refining and defining the rocks. I work from the back to the front, increasing detail as I move to the foreground. I'll take a step back occasionally and think about the terrain. Sand storms etch into rock while sand and debris drift into crevasses. Thinking about the terrain will help you understand the painting process a little more. I'll try to blend a bit of sky colour into the shaded part of the rocks to help the formation blend into the landscape.



10 Point of interest

When I'm reasonably happy with the background rocks I've painted, I'll add the base rock for the main point of interest on a separate layer. I haven't finished the foreground rocks, but that's fine – I'll go back to them later. Using the Color Dropper, I select the colour of the rock shadow parallel to where I'm going to place the rock plinth and paint in the shape of my base. I'll also add some small formations around the structure to create a semi-circular path up to the plinth. When detailing the rock base itself, I'm going to be a little more generous with its direct highlights.



11 Half way?

At this stage of the painting I'd recommend to start alternating between Auto Clean and Instant Dry with the brush strokes. You'll find that you can add more expressive strokes and increase the variation of textures this way. The brush should not exceed 40 per cent at this point, so I work on the rock detail and the drifts of sand. If you find any part of your image taking on a greenish hue, pull it back by dropping a low opacity layer of red or orange over it. You'll find that you'll have to paint back some of the contrast afterwards if this happens.

12 Moving around the picture

As the painting progresses it's a really good idea to move around the image and keep a good level of consistency in each area. I try not to spend too long painting any one area, splitting my time between the sky and the sand, the rocks and the central point of interest. The things that you need to work on last are the small details that help bring the picture to life. If you want to add a new element, paint it on a layer first and only merge it when you're happy. I decide to add some smaller rocks here and there, and vary the shapes of the rock formations a little. I'm happy with what I've done here so I move on to the bigger details.



13 Paint in the planet

Some objects in this image need to have an accurate shape, so – unfortunately – it's time to use the stencils and the rulers. For the planet, I select the Sphere 2 stencil and rotate it round so that the unmasked area is in line with the direction of light. I resize the stencil to a reasonable planet size and move it to the top of the screen. Then I create a new layer and roughly paint in a gradient of yellow to red. Now it's time to use the Eraser Brush to take care of any overpaint, and pull out some craters or other interesting features. I'll drop the layer when I'm satisfied it all looks okay.



14 Point of interest II

For the rock formation, I use the Square Ruler stencil shape to fill in the general area. I resize the Ruler and fill out a shape on the top and bottom of the larger object. Use the Sphere 2 stencil to round off the object's bottom and the Long Ruler for a straight line through the middle. I render the shapes with the colours used for the plinth. For effect, I add broken bits of structure, but keep the rendering consistent with the painting.



PRO SECRETS

Eraser texture

Create a new layer and flat paint into it. Use the Eraser tool to scratch out a rough texture and then lower the opacity. Position the layer over a rocky area for extra textural effect. Clean up before merging.



WORKSHOP BRUSHES

ARTRAGE 2

CUSTOM BRUSH: ROLLER BRUSH TOOL

Set pressure: 25 per cent

Set thinners: 25 per cent

Set loading: 75 per cent

Auto Clean: On

Size: 100 per cent

Use this to cover the canvas quickly



CUSTOM BRUSH: PAINT BRUSH TOOL

Set pressure: 50 per cent

Set thinners: 25 per cent

Set loading: 50 per cent

Auto Clean: On

Size: 50 per cent

Use this for all-round painting



15 Mystery bubbles

The strange bubbles at the top of the structure give the painting another layer of mystery. They fit in nicely as an uncomplicated but acceptable phenomena for this style of picture. It'll give our spacemen something else to look at too. To paint the bubbles, I create a basic sphere in a dark pink, and add a crimson shadow to the bottom. I spot a highlight at the top corner nearest the light, and another in the opposite corner and it's done! Repeat the process, but vary the sizes.



16 Introducing the spacemen

Because the planet is quite bright, you need to use the landscape colours. On a new layer, I paint the spacemen's basic shape in the darkest foreground colour and immediately paint the sharpest highlights that define them. Get this right and the rest is easy. Then, I work the light into the dark using the reds and oranges of the landscape. Try to define the shapes, but don't over define – keep it consistent with the surroundings. I add a layer beneath the spacemen to create a long shadow, and to finish, I add a few random star dots.



"The image should suggest
this machine could really
be produced"

Jesse Van Dijk (page 156)



Robots

Whether they're towering 40 feet off the ground or scuttling around the feet of some imaginary laboratory scientists, robots are a thrill to create. These workshops demonstrate how to handle scale, concept design and detail to create the perfect futuristic robot.

Featured artists



Keith Thompson



Freelance artist Keith has produced concept art for books, RPGs, video games and

films. He often works with Guillermo Del Toro, most recently on Pacific Rim. Keith's workshop uses a piece of robot art to help explain some of the processes that go into creating daring new concept imagery.

www.keiththompsonart.com



Jesse Van Dijk



Jesse lives in Seattle and is a lead concept artist at Bungie, where he produced

concepts for the worldwide smash-hit game Destiny. Here he turns his attention to the process of creating a massive war machine. This workshop teaches how to handle scale and create intricate detail to give a machine character.

www.jessevandijk.net



Christian Alzmann



Christian honed his art skills at ILM, beginning in 2001 when he worked on

Spielberg's robot saga Artificial Intelligence. His wealth of knowledge was too great for one workshop, so he's put together 25 must-read tips for creating and painting original and believable robots. Enjoy his art and ideas on page 160.

www.christianalzmann.com



Saejin Oh



Renowned digital comic artist Saejin has created a stunning manga infused image to

demonstrate how to design, plan and render a robot scene from scratch. Even if you've never attempted a painting like this, his easy to follow step-by-step guide will draw you in and make the impossible, possible.

www.saejinoh.blogspot.com





Photoshop CREATE A ROBOT CONCEPT

Learn the process of visualising a robot concept design, from sketches to final touches, with **Keith Thompson**

For this workshop, I'm going to guide you through a traditional artistic process involving pencil on paper, through to the digital process – using Photoshop – to create a robot concept. Note that the specific artistic techniques used in the following would simply be one way to come to something closely resembling the finished result. This is just the best way for me.

The initial step in any concept design is often nebulous and regrettably hard to detail, it being an idiosyncratic process

often unique to the artist. There are two common approaches to the conceptual realisation of your design, and these are applicable to cases where you have a detailed brief or a completely open slate to work with.

One is the on-paper shotgun effect, where you put down a rapid series of thumbnail sketches, often simple silhouettes, and begin to home in on areas that catch your eye. Another approach is to obsessively roll detailed images around in your mind's eye for a period of dedicated time before laying

down a single, definite thumbnail sketch to ensure that the visual imagery is working. The latter technique is how this particular design will be created.

For this robot concept, a concrete time and setting has been decided upon. It's going to be set in a relatively near future, in a post-nuclear war Europe. Despite no background or additional elements in the picture, this environmental concern will run as an undercurrent through the appearance of the robot. The robot itself would match its setting with a bleak, worn and muddled impression.

Artist PROFILE

Keith Thompson
COUNTRY: Canada



Keith is a freelance artist who specialises in concept art

for books, movies, video games and RPGs. He's written several books teaching the creation of concept art, and his work's been featured in the Spectrum art annuals.

<http://ifxm.ag/keith-t>



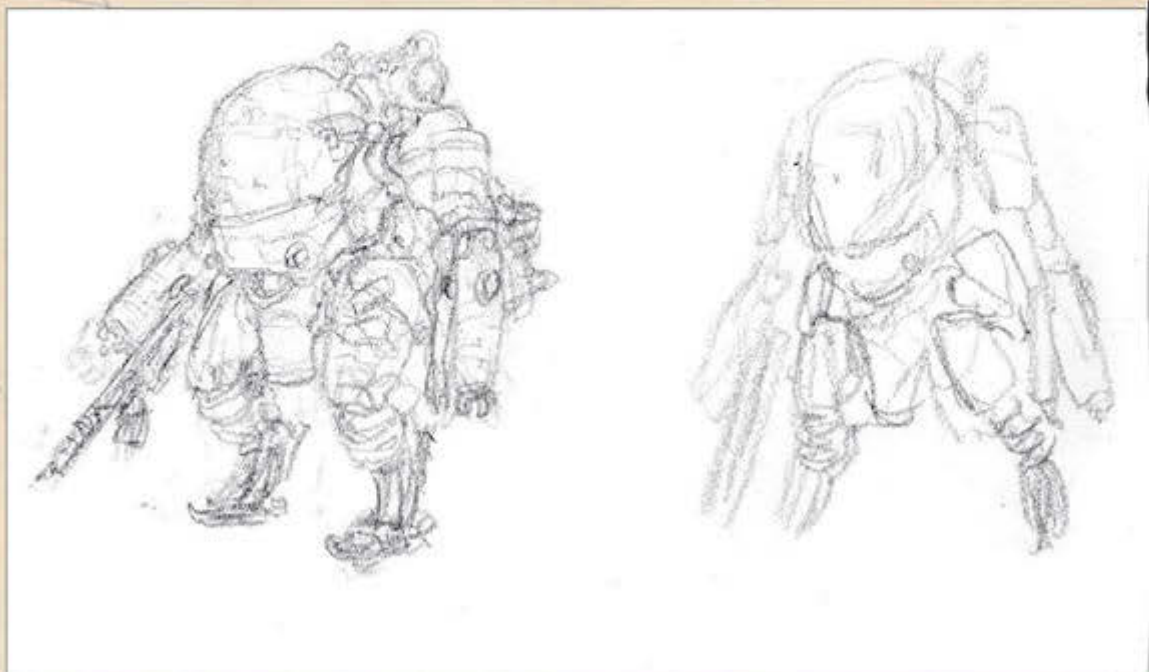
GET YOUR RESOURCES

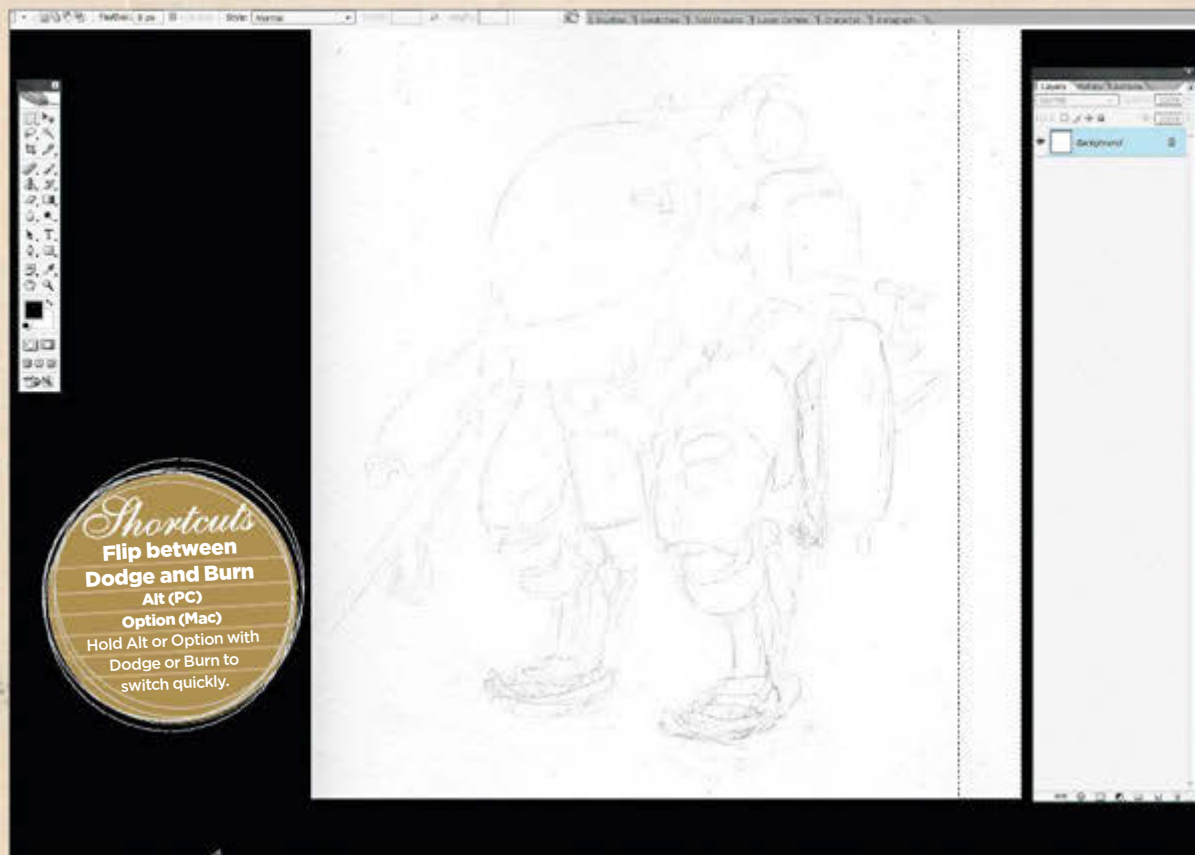
See page 226 now!

1 Thumbnail sketch

This is the culmination of the imaginative development of the robot. The major elements of the design are first and foremost defined by the setting of the robot. In this case, it exists in a fresh post-cataclysmic near future. Conceptually, this will actually encompass the relics of a technologically developed near future, and plunge these themes into a shattered, primitivist world.

A broad, tank-like body is the central approach to the robot's silhouette and initial impression. This is padded even further with contrasting additions, which merge the technologies of two widely varying situations in one concept. The robot will be loaded down with scavenged junk, with parts of its plating buckling and additions haphazardly tied and taped on. A quick secondary thumbnail sketch explored making the robot slightly more agile, but this lost the desired feel and went unfinished.





2 Sketched layout

This is the line work for the full-size design, and it'll be carried forward to the finished artwork from here. This closely mimics the thumbnail. It's possible for you to actually blow up your thumbnail, transferring it to paper to work over, or tracing it on a light table. This can preserve the proportion and gesture of the original sketch, but can also prevent you from introducing more visual sophistication in the larger depiction. Occasionally, when switching to full size you may become aware of possible modifications or improvements, and it's important not to become bogged down in blindly carrying forward specifications without giving these some thought.

3 Points of interest

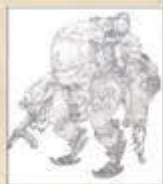
New points of visual interest can be incorporated into the design at every step along the way, which helps create a rich layering of depth. Certain elements I've added, including the large sockets on the breastplate section, will be worked out in detail later – at the moment they look a little bit like eyes.

By this stage the major design elements of the robot are solidified, with only minor details to be added during further rendering. The real impression of the finished design should be fully apparent at this stage, and any areas that fail to please you need to be fixed before you move on from here.

4 Scan the line work

Now I'm going to scan the pencil line work in, as the rest of my work will be done digitally. It's important that the pencil work meets your standards at this stage because it won't really be possible to directly modify this line work without returning to the drawing, rescanning it and transplanting it into the digital stage. It becomes a whole job of its own.

It's a good idea to scan at a resolution higher than you plan working on. Clean up this scanned image and then convert it down to the working resolution.



Depending on the type of medium and paper, it may be advantageous to scan in colour and take advantage of the ambient hue variety.

PRO SECRETS

Back it up!

As you work it can be a good idea to stagger your progress through a series of files. For example: robot01.psd, robot02.psd, and so on. This enables a progressive backup in case of a saved mistake or corrupted file, and also enables you to go back and grab parts of the artwork that may now be flattened. Ensure you keep track of the newest file so you do not return to the task and accidentally redo work already completed in another file.



5 Greyscale value

I do a mask of the character (in the case of an artwork depicting a scene, every major element may have its own mask) made with a layer and a colour fill, which I then set to an Opacity of 0 per cent. You can return to this mask by using the Magic Wand on the layer, and any modifications can quickly be made by erasing or adding to the colour fill. Shadows are loosely laid in with an Airbrush. I use a white fill set on Multiply on a new layer above, with the Burn tool set to Highlight. Remember to keep the shading basic and consistent – it should not appear perfectly shaded at this stage because this process is more intended to designate areas of shadow.

6 Canvas ground

Now I lay an undercoat or base texture over the shaded line work. The hue of this base will affect the unity of the finished piece, so I opt for a warm earth tone. This specific texture is a composite of several layers of cracked leather and paper. I like to compose my own individual textures and build them up with use. Your choice of textures will help give a uniqueness to every piece of artwork you create.



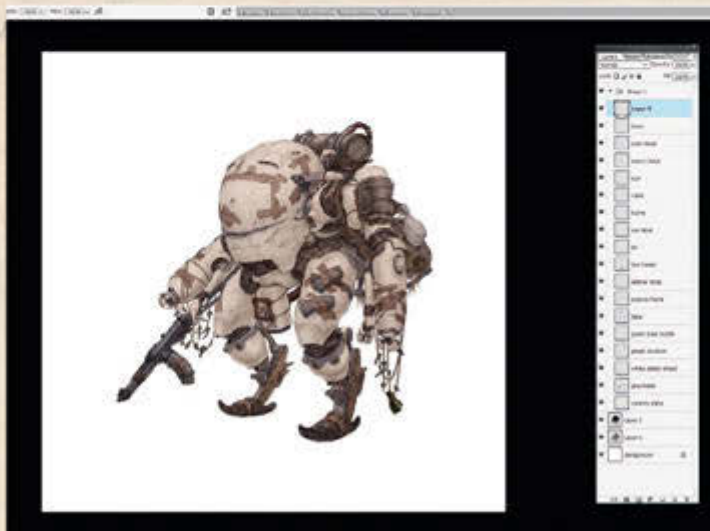
7 Highlight value

I flatten all the layers together and pass over the entire work with the Dodge tool set to Midtones (in the Options bar). Some slight fixes using the Burn tool, also set to Midtones, are worked in during the process. This stage is as much about drawing as painting, with highlights being applied in a line to support the existing black line work. An obvious variation of hue is starting to develop and will affect the colour glazes that follow. If you want, you could work up to this point completely in greyscale, and then use the Colour Balance menu to warm that with red and yellow in the shadows before proceeding to the glazing stage.



8 Initial glaze coat

I create a folder in the Layer palette set to Soft Light, with individual layers within it acting as colour glazes over the shaded drawing below. Each main hue has its own named layer and each coat is a flat glaze of colour, with the only variance being slight adjustments to the individual layer's Opacity setting. Remember that using this technique will actually change the value of the greyscale underpainting, potentially throwing the composition and visual hierarchy out of whack.



Shortcuts Map buttons

Map the buttons on your tablet pen to adjust the size of your brush on the fly. Playing around with the zoom will fine-tune the brush size.



9 Final glaze coat

Next I create a secondary set of glazing layers that compound an additional colour to the previous glazes, adding a warmer hue in a highlighted space, or a cooler hue in the shadows.

Additionally, I create a series of layers outside of the Soft Light folder. These new layers are set to Multiply and are used to introduce a series of scans of splattered paint specifically created to simulate the mud, rust and mould on the robot. I'm sure to take care on their build-up, so that a complex, multi-layered coat is created, which conforms to the curving surfaces it lies upon.

PRO SECRETS

Texture library

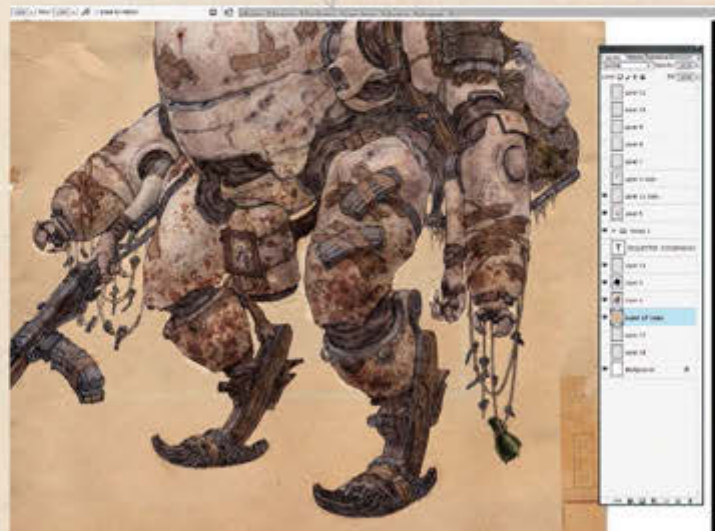
Multiple layers of canvas ground interacting with each other increase depth and richness. Even if the compounded effect seems subtle, it'll still give more complex hues and textures in the finished piece. Build up a library of papers, painted undercoats and other materials you have scanned and then pick and choose between various combinations.

10 Elaboration

The entire work is flattened again, and additional passes with the Burn and Dodge tools deepen shadows and bring out focal points.

An old piece of paper is prepared and scanned as a backdrop and worked in behind the artwork. Take care that this backdrop supports the artwork without dominating it or clashing with it.

Whatever method you use in the conceptual stage of your project, be it a number of sketches or one focused design, make sure you get it up to scratch before going digital. It'll make your subsequent work much easier.



Photoshop VISUALISE A GIANT ROBOT

Learn how to create a grand, complex robot design on an epic scale, with **Jesse van Dijk**

Giant robots are cool. I guess it's something about the idea of a larger, stronger, mechanised image of ourselves that seems to resonate with a lot of people. So when you start working on a new image that has a giant robot as a centrepiece, you know that if the image isn't a success it won't be because of the subject matter.

This workshop will focus on creating a concept illustration of a large-scale robot that has a sense of believability about it. I'll be aiming to keep the overall look somewhat in touch with comparable, modern-day pieces of space machinery. The image should suggest this machine could really be produced as some secret

government project. In other words, it must feel kind of serious, and it must be so big that you can't help but feel a little small yourself.

There are some difficulties with designing and visualising at the same time. Doing both simultaneously isn't always as effective as concentrating on one action at a time. I'm more interested in the overall feel of the design, and not so much an exact blueprint. This means I'll be suggesting details rather than engineering them at micro-level. In a production pipeline, such an image could be used to determine the feel of a certain shot, and provide a rough preview of what a design would look like.

Artist PROFILE

Jesse van Dijk
COUNTRY: Netherlands



Jesse is a lead concept artist at Bungie, and his most recent project

was the game *Destiny*. He studied Industrial Design at Delft University of Technology and worked for several game studios, including Guerrilla as part of the Killzone art team.
www.jessevandijk.net



**GET YOUR
RESOURCES**

See page 226 now!

1 The concept

Always think about the image you want to create. Before actually picking up a pencil, Wacom pen, or whichever drawing material you prefer, try to envision the sort of thing you're aiming to portray. This doesn't mean pinpointing a composition or colour palette beforehand – it's about the general feeling you want the image to convey.

2 Acquire reference

Larger-scale objects have some specific visual aspects. Shapes become simpler as they get bigger, and colour patterns are less complex. Gather proper reference to identify these. In this case I look at construction equipment and a space shuttle. A collection of 50 images or less is enough and will prevent you from losing track of your goals.



4 Further defining the robot pose

Once I've got the initial pose more or less the way I like it I go on to consider the basic proportions of the individual limbs.

In this case I'll go with what I consider to be a conventional masculine male figure as a rough guideline. One specific area I need to put in special effort for at this stage is the position of the feet. If they're too unclear, I'll risk making him look unstable, which is the exact opposite of what I'm aiming for.

Shortcuts

Quick Mask

Q (PC & Mac)
Enables you to paint a selection. A powerful tool when used in combination with the Gradient Tool.

WORKSHOP BRUSHES

PHOTOSHOP

CUSTOM BRUSH: BRUSH TECH

This brush enables you to quickly create a surface with an industrial look. It also performs well on a separate layer with perspective transformation applied.

PRO SECRETS

Flip the image continually

Remember to flip your image all the time – not just horizontally, but vertically as well. It will help you to get a fresh perspective on your work and prevent nasty compositional troubles from creeping in. Remember to walk away from your work every now and then too, for the same reason. Maintaining a global view is crucial.



5 Perspective

The overall proportions of the robot are okay, but the perspective isn't impressive enough for my liking. I'm still at a very early stage, so I can get away with a lot of brute-force approaches, like transforming the entire sketch in perspective. Doing this will initially make it very obvious that I've just transformed a flat plane with my sketch on it, but a few simple brushstrokes will fix that. What also helps is to include some elements that have obvious and in-world perspective distortion, like the frameworks shown here. If needed, you could paint a perspective grid.

6 Sense of scale

I've got the rough design down and sorted out the perspective. Now it's time to set a temporary scale marker. I put some people down in the scene to constantly remind myself of the proportions of the scene I'm working on. At this scale these people are little more than white dots, but that will still work. I find people work best to indicate scale. Objects like cars or trees can vary quite significantly in scale, so be careful when you use those. Note that these people aren't necessarily intended to remain in their current position in the final image – they're really just scale markers for the time being.

3 Determine the silhouette

Before I think about lighting, details, colour and everything else, I want to make sure I get a rough idea of what my silhouette is going to be. This will be a first macro design pass, as well as a determination of the pose of the robot. Digital tools enable me to paint, cut and paste, distort and transform my sketch as much as I like. I don't worry about resolution or tightness for now – I just concentrate on the silhouette.



7 Lighting scenario

The final macro-pass is the lighting scenario. To make sure the robot's design features pop out later, I'll light him from above and the left, ensuring the light is almost perpendicular to his side. Some areas of the robot will be dark because of self-shadowing, meaning lots of contrast – which is good. With the critical elements in place, it's all about less important issues from here on.



8 Design definition

At this point I'm starting to think about a little more micro-design. The proportions of the robot are roughly based on a muscled male figure, so to further bring that point home I'll use some major muscle groups as inspiration for some design elements – there are some repetitive elements in place for the abs, for example. Like the feet, the ground plane is used to place the robot in the world correctly, so pay close attention to its position in the scene.



9 Facial features

As I keep looking at the robot design on a more detailed level, I consider some of the most important micro-design elements, including the face. A face is often the single most important aspect of an image, but since this scene is so big, and I'm looking at a mechanical object with lots of other design details, I can get away with more looseness in the face than I might have if it had been a human I was painting.



10 Final detail alterations

Before I start out with colour, I have to go over the design I've done so far. His arms aren't working, so I need to address that. I want to have a better image of them before I continue, because once I apply colour things will be slightly more tricky to fix. Another thing I must do is get some sense of the detail level of the final image. To save time I'll paste some photos on top of the painting, taking care not to overdo this step. It's always tempting to start detailing too soon, and I might have already done just that anyway. Time for some colour.

WORKSHOP BRUSHES

PHOTOSHOP

CUSTOM BRUSH: BRUSH FENCE



This is useful for adding a fence at a recognisable human scale. As with the Brush Tech option on page 157, it's great when put on a separate layer and then transformed in perspective.

11 Colour planning

I consult the reference material gathered earlier. For this image, the overall colour pattern of the robot will be mostly simple – relatively desaturated materials coloured primarily through lighting. My approach for colouring this image is uncomplicated – I'll change the colour of the light along the direction of the light rays. I'll go from a warmer, orange light colour for the objects close to the light source, to a colder, bluish colour for the objects further away.

12 Beginning to add some colour

To realise the above, I first flatten the black-and-white sketch. Next, I create an Overlay layer and fill it with a warm greyish colour. Depending on the colour you choose to fill the layer with, you have to tweak the Opacity of the Overlay layer to make it look good. Initially I am looking to achieve an overall warm feel for the entire image. Once I've got it, I flatten the whole image again.



13 Further colour variations

Next I duplicate my single layer and use Colour Balance to add blue to the layer. Then I create a layer mask for this blue layer. This contains a linear gradient, from black in the top left corner to white in the lower right. I make sure the silhouette of the robot itself is also black in the mask – this is to prevent the bluish tint from affecting him, limiting it to colouring only the background. Finally, I flatten everything again and, with the brush set to Overlay mode, apply a selection of local colour variations to the image to liven it up.



PRO SECRETS

Variations

One highly useful feature Photoshop offers is Variations (found under Image>Adjustments>Variations). It enables you to colour-balance your image in a straightforward and visual way. You'll get a preview of what the image would look like if you added more of a specific colour to the midtones, highlights or shadows, enabling you to simply choose whatever looks good.

14 Colour consistency

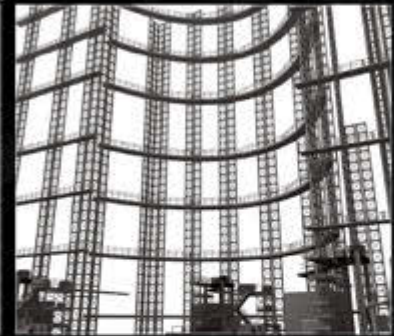
Right now the colours are a bit all over the place, but that's not really a problem. If you want to experiment with different colour schemes, now is the time. Mess around with your Colour Balance options or Curves Editor – whichever works best for you – until you're satisfied. The colours in the image are currently too disparate, so in order to pull everything together, I create a new layer, fill it with a desaturated orange, set the layer to Overlay and flatten again. The colours in the image are now slightly more alike.

15 Cleaning up

My result so far is very rough, so I need to clean it up. It's time to get rid of all the junk – in the course of trying out various design elements and colour tweaks, the silhouette has suffered a bit. It's very useful to save a selection of the silhouette once you've cleaned it up, since it enables you to tweak much faster later on. As there's a lot less noise in the image now, I can be a bit more subtle with the saturation, so I desaturate the robot a little and add some coloured orange bands as saturated centres of interest.

16 Background creation

Time to consider the background. With such a detail-rich centrepiece, I don't want to place too much emphasis on the background, but it would be good to reinforce the sense of perspective by using it. You can create some simple geometry with lots of repetition and without any significantly eye-catching features. Because of the heavy repetition, I generally use 3D in such cases – but of course painting is just fine as well.



Shortcuts

Dodge tool

O (PC & Mac)

O selects the Dodge Tool; Shift+O alternates between the Dodge, Burn and Sponge tools.

17 Background integration

Using the selection I saved of the robot I can easily place the background behind him. Here I've used a lit 3D model, but the lighting doesn't fit the scene. I use the Dodge and Burn tools to resolve this. To suggest lots of activity, use night time photographs of city skylines with their blending mode set to Lighten, so the coloured highlights remain visible.

18 Final tweaks

To finish, I make sure the levels are correct, tweak some last bits of colour, or change a design detail. Take care not to overwork things. Nothing you do now will make or break the illustration. ●



25 STEPS TO BUILDING BETTER ROBOTS

Learn how to design and paint compelling robots with the help of **Christian Alzmann**

Throughout the history of sci-fi, robots have always created a sense of wonder. We're fascinated with the idea that machines could walk, talk and even think on their own, and with just some scrap metal and genius we can create our own Pinocchio or Frankenstein's monster. Growing up in the 70s and 80s there were

so many memorable robots to inspire me. Take Star Trek, for instance. While I don't consider myself a Trekkie, I can definitely remember Data, the holographic Doctor and Seven of Nine.

I grew up drawing all of the things that intrigued me, many of which were robots. They can be drawn in endless varieties and attitudes. As an art director at

Industrial Light & Magic I've had the pleasure of creating a lot of robot-based concept art. Some of the projects I've worked on are AI, Men in Black II, Star Wars Episode II, War of the Worlds, Transformers and, most recently, Terminator Salvation. In this workshop, I'll take you through my top tips for painting better robots.

Artist PROFILE

Christian Alzmann

COUNTRY: US



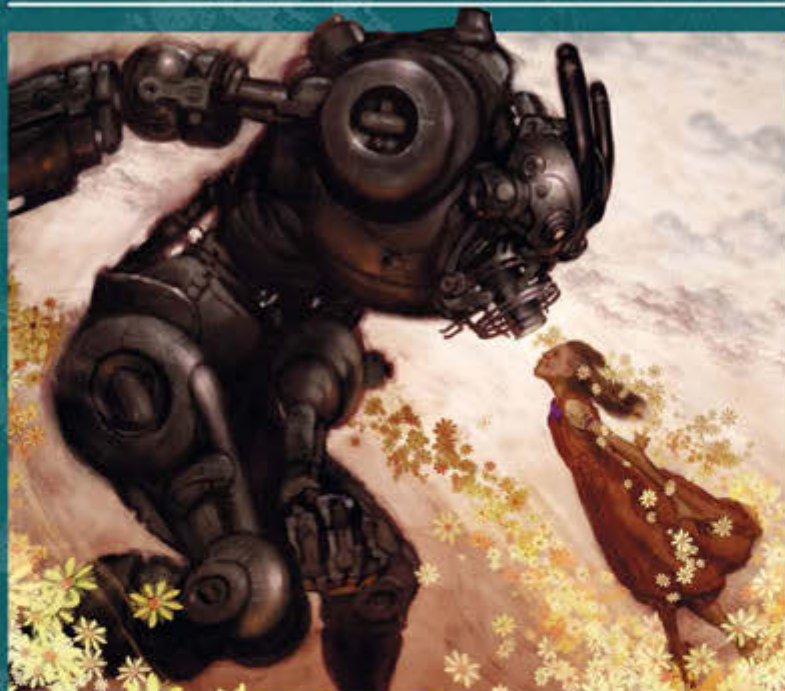
Christian is an illustrator and art director. He's worked on many

high-profile films including Star Trek Into Darkness, Noah, Rango and Cowboys and Aliens. He now runs his own art studio.

<http://ifxm.ag/calzmann>

GET YOUR RESOURCES

See page 226 now!



1 BUILDING A STORY

Designing anything is much easier when you have a place to start. Often writing a paragraph or two of backstory on the robot can be a huge help. Where does it come

from? What's the robot's history? Who made it? Who is it? What was it designed to do? Ask yourself these questions before you start, and then illustrate the answers.



2 BREAK THE HUMANOID MOULD

Don't constrain yourself to human forms. Whether it's intelligent or not, a robot can take any shape or form. Often, people latch on to humanoid shapes when designing robots in order to get the viewers to identify with them. Of course it works, but it's not mandatory. Cartoons have been breaking this rule for decades.

3 PERSONALITY

Give it some personality. Without one, any robot can be lifeless – which isn't to say that a lifeless or zombie robot doesn't also have its time and place. Is your robot a big angry palooka? A mad scientist? A hero or a hungry bug? Defining this will help keep your robot in character and make the design coherent.

“Is your robot a big angry palooka? A mad scientist? Defining this will help keep your robot in character”

4 RUSTY METAL

Rust can be great for adding colour to otherwise grey metal robots. Looking at references, you can see that rust usually occurs most where water and moisture get trapped. Add some of that distinctive orange colour to the undersides and nooks of a robot to give the design a real-world feel. ➡

5 THROW IN A CURVEBALL

Oddity stands out: We see a lot of robots, so think about what you can do to push your design somewhere less obvious. For example, maybe you have a round, jolly-looking robot that has a couple of long, sharp fingers. There's visual tension in this because it looks as if he could be a danger to himself.

6 REPETITION

Repetition is a basic principle of design. If there's a part of the robot that you like, use it in a few places. This ensures that the overall design has a theme and isn't a hodgepodge of stuck-on pieces that have no relationship to each other. Repetition can also be a great help if you're having trouble with filling out design details.

7 SHAPES

Strong shapes and silhouettes can help make a design memorable. I always try to get a strong, readable shape. Build a clear, dark silhouette that still reads well when it's the size of a postage stamp. At this stage, keep the shapes simple and, as you add details and breakup, remember where you started. Aim to keep that initial statement.

8 RENDERING LIGHTS

Robots often have a power source in them somewhere. Sometimes I use a bright value on its own layer and add an Outer Glow layer effect to lay in where I want my lights. For a more painterly feel, I change the Brush mode to Color Dodge, use a fairly desaturated colour and build up the centre, getting brighter and brighter.

9 HISTORY

Whenever it's applicable, add history. If the robot has been around a while, you can add dents, scratches, grease, rust and replacement parts. This can give the robot a past and add to its on-screen persona. I always liked how C-3PO had that one silver leg. It added to a personality that said, "I always seems to be in the wrong place at the wrong time."

10 POINT OF VIEW

Every image has to have a point of view. To make a robot look big, put the eye level at his knees. If you have a tiny robot, look down on it. The dead-centre point of view that you see in a lot of concept art shows the design, but you can add more story by changing it to something more dramatic.

11 FUNCTIONALITY

Functional details can make or break a design. For realism, it's vital that joints look like they can move, extend and rotate. Practise drawing gears, pistons and other mechanical parts so you can produce them from memory. When it's time to design a full robot, you can hit the ground running because you now have an arsenal of mechanical knowledge for your design.

12 REFERENCE

Study mechanical references to add reality to your design. It's easy nowadays to look online at pictures of jets, cars and engines – and to take your own when you're out and about. Keep a reference folder on your computer of all the images you might find inspiring. There's nothing that can ruin a robot design like appendages that don't hinge properly or have no means of locomotion.

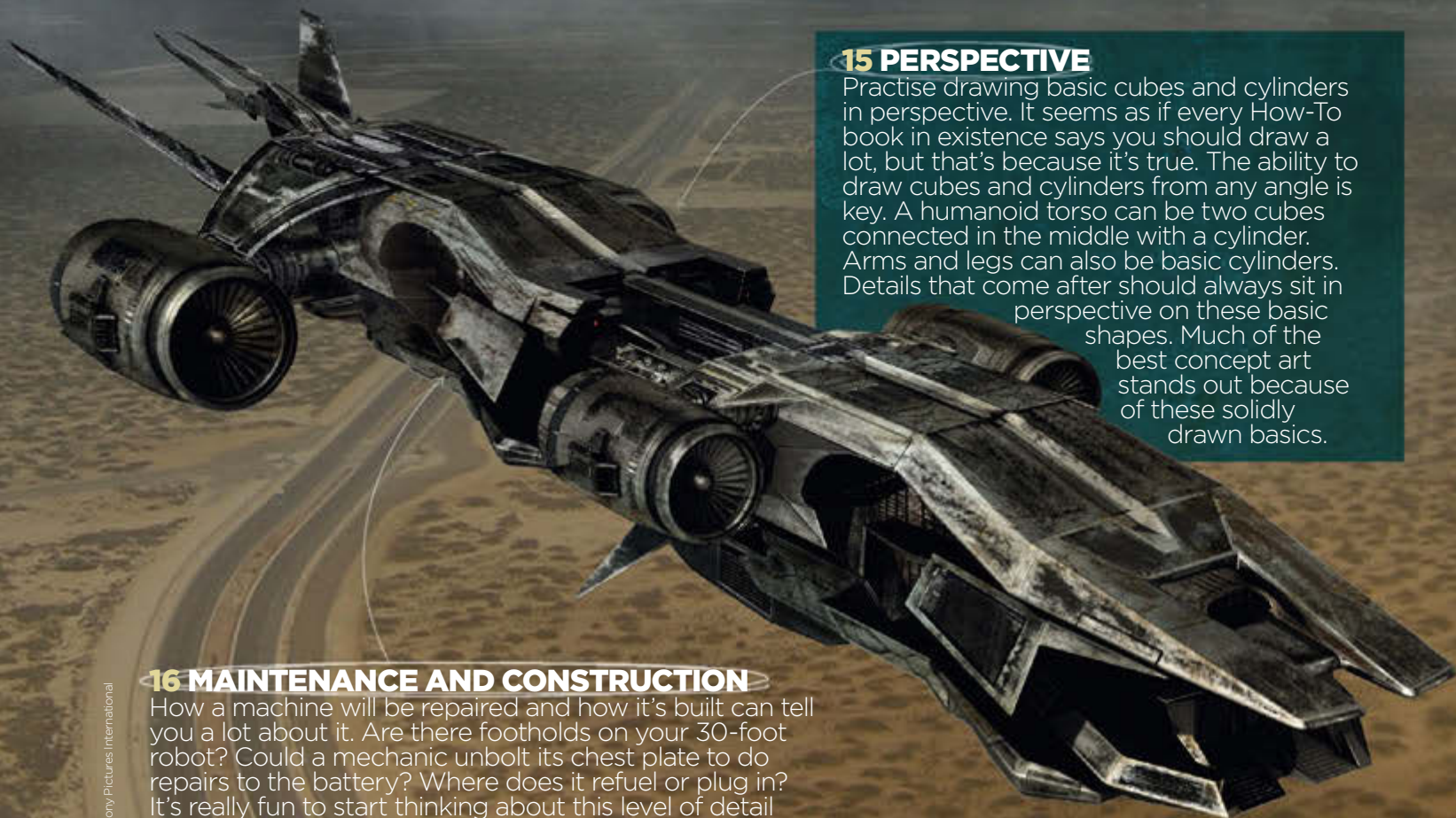
13 PURPOSE

What's its purpose? As with all design, the old adage that form follows function applies here. All robots have a purpose – some reason for being built. They can be scouts, fighters or thinkers. Pretend you're a robot engineer and you've been given the task of creating this robot to perform something critical. Does it need to grab objects? Does it need to be fast or stealthy? It's important to know how it'll move around and animate before you start drawing arms and legs.

14 SETTING

The setting can really help sell the robot's story. It doesn't have to be a whole finished background, but just something small like the ground he's standing on or a prop in his hand. It's also an important step if the robot is big or small – a bit of added setting can go a long way to help define it. 🚀

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15 PERSPECTIVE

Practise drawing basic cubes and cylinders in perspective. It seems as if every How-To book in existence says you should draw a lot, but that's because it's true. The ability to draw cubes and cylinders from any angle is key. A humanoid torso can be two cubes connected in the middle with a cylinder. Arms and legs can also be basic cylinders. Details that come after should always sit in perspective on these basic shapes. Much of the best concept art stands out because of these solidly drawn basics.

16 MAINTENANCE AND CONSTRUCTION

How a machine will be repaired and how it's built can tell you a lot about it. Are there footholds on your 30-foot robot? Could a mechanic unbolt its chest plate to do repairs to the battery? Where does it refuel or plug in? It's really fun to start thinking about this level of detail and it can add a realistic depth to your design.

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17 SHINY METAL

Shiny metal doesn't need to be tricky to paint and full of complicated reflections. A good rule of thumb is to work from dark to light, adding the highlights last. For something to look shiny, it has to have bright, sharp-edged

“ Highlights are a reflection of your light source... the only way to see them is to put them on top of something dark ”

highlights. These highlights are a reflection of your light source and, since they're bright, the only way to see them is to put them on top of something dark. Even if your robot is shiny white, bring the values down in the areas surrounding the highlights.

18 SIMPLICITY

Keep it simple and readable. Many robot designs suffer from having too much detail and texture. Some are so busy with details that the viewer doesn't know where to look. For a design to be good it has to have places where your eyes can rest. When the robot needs a million parts on it, make sure you leave simple areas in key spots, because those are the places viewers will look.

19 GRAPHICS

Use the Type tool for graphics. Type and graphics can be a nice added detail, but again, make sure they follow the story. Is the font or graphic in an alien, human or machine language? Once you have a graphic you want, transform it to fit on top of the robot using Transform>Mesh Warp.



20 BALANCE

Keep your design balanced. Whether it's futuristic or steampunk, try to maintain one aesthetic only. There are most certainly times and places where a Frankenstein-like mix will be called for, but if you have high-tech robot parts next to bicycle parts, then you should have a good reason for it. Don't mix and match technologies from different historical periods. In fact, a useful rule is to make it look like your robot was built in one era and by one culture.

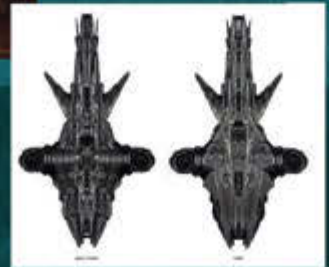
21 COLOUR

Remember to choose your colours as if you were the engineer who built and designed this robot from scratch in the real world. Colour should also follow its function. Ask yourself questions – what practical reasons might there be for the robot being a certain colour? Should it be stealthy, inviting or frightening? I also recommend that you avoid using too many colours for the painted surfaces. Start with only two and work out from there. Also, it's okay to paint the whole robot in black and white, and add all of the colour at the end using a colour layer.



24 GESTURE

Robots require gestures to come alive. They're machines, but you need to have a sense of character and movement for them. Take a look at the animals and people around you. They all walk, stand and eat differently. If you were an actor and had to wear the robot as a costume, how would you walk or stand?



22 TEXTURES

Whether pitted, rusty or cast metal, texture can be very alluring – and with Photoshop, it's easy to plop a photograph on top of everything to texturise it. However, texture needs to be used carefully and, whenever possible, it should wrap around the forms in perspective. You should favour either the light side or the shadow side with the most texture. Covering everything equally won't help add a realistic quality to your images.

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23 ORIGINALITY

Keeping the robot original is very important. Put away any pictures you have of famous designs. We all draw inspiration from them, but as a professional designer, existing film creations are only to be used as something to avoid. Unless you're working on a sequel, draw your inspiration from some other source. There are many amazing things in our world to look at for inspiration, so find the ones that interest you most, take pictures of them, draw from them and set yourself apart with an original design.



25 SHADOWS

Rendering shadows can be done using a Multiply layer over your drawing. You can change the Opacity for a lighter or darker shadow. The edge of the shadow describes the form. As light rolls off a round form, the shadow edge is soft. When a shadow is cast on an object, it's sharp. Render in this way to clarify your robot design.

Photoshop

SCI-FI MECH ART

Saejin Oh reveals his thought process and the painting techniques he uses to depict a combat mech and its jump-suited pilot

Artist PROFILE

Saejin Oh

COUNTRY: Canada



Best known for his work for Udon Entertainment, Saejin

specialises in character design and manga art.
<http://ifxm.ag/saejin-o>



GET YOUR RESOURCES

See page 226 now!

When you paint science fiction you don't create something out of nothing. Instead your imagination creates something new, based on what you already know. In a sense, your artwork is a mosaic of the knowledge you possess, but put together in a certain order to create something vibrantly original. All that might sound daunting, but there's

nothing to worry about. I don't know any more than you do – it's how you use your ideas that counts. Painting sci-fi enables you to unleash your creativity, bringing to life anything from weird aliens to hulking robots. The flipside of this is you need to know how to paint different materials and create futuristic designs.

Before getting started, I like to have a clear idea of what I want to draw. Think of

it as a tree – you can always branch out with your ideas, but you'll need a trunk for those branches to stem from. You can develop ideas and finishing touches as you draw, but you'll need a solid direction for your ideas to grow into.

For this workshop, I chose the subject "A female mech pilot in a bright, colourful suit." So, let's see where our imagination and that topic takes us.

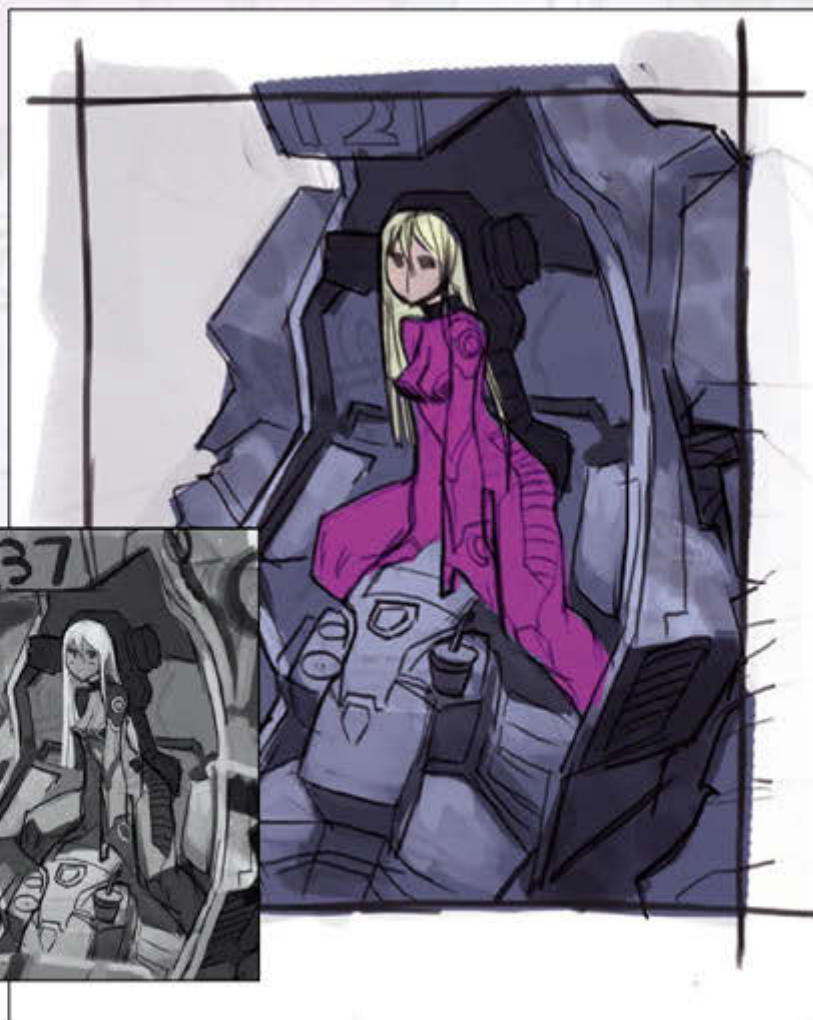
1 Start with a thumbnail

Every painting I do starts with a thumbnail, outlining the goal for the finished piece. You don't need to put a lot of detail in your thumbnail, just try to clarify in your own mind what you're striving to achieve with the image.

At this stage, it's important to keep it simple and display your idea clearly. Remember, your sketch doesn't have to be structurally or anatomically sound – those errors can be mended as you develop your painting. All you're doing is getting down the design elements and creating a basic colour reference.

2 Create a rough end goal

Now that you have a subject and a thumbnail to develop your painting with, try going a bit deeper into the elements of the sketch. Add new ideas and remove old ones that don't work as you originally envisioned them. Modify clunky ideas as you go. At this stage I feel that the mech design isn't working because I'm having trouble grasping the concept as whole. Fortunately for me there is a simple solution to this problem...





3 Expand the view

If the object you're drawing is larger than the entire canvas, you may have trouble understanding the structure of the object as a whole. I'm sure that this is a problem every artist experiences occasionally in their work. To combat it, and to restore your sense of perspective, increase the size of the canvas so the entire object fits. You can always crop out stuff you don't need later.

Because of the canvas increase my file size is pushing the limit, but that's fine for now. I quickly draw in limbs for my mech. It looks rather awkward and will need adjusting as the image develops.

4 Develop the idea

The skinny limbs aren't working well for the size of mech I'm drawing. I decide to buff the mech up and change one of the guns into a hand with an opposable thumb, adding variation to the design. I drew inspiration for the mech from modern tanks, as well as sci-fi games and movies. As a result, the design of the mech is sharp, angular and boxy. Most of the exoskeleton is well protected, as are the internal wires, hydraulics and gears. I have other design ideas popping up, but I'll hold on to those for now. Since I have the basic structure, it's now time to connect the girl and mech together.



5 Give dimension

Since I drew the whole mech without any perspective guidelines there are bound to be errors. To find them, I quickly draw a two-point perspective on a foreground Multiply layer, erasing any lines that cross over the mech. With this indication of space, I have to choose

where the it will be in the composition. This means selecting a background. As I drew the pilot with the hatch open I can't really have her on a battlefield. After some internal debate I settle on a garage to complement the mech's passive stance. I also sketch an oil heater on the wall, blending the elements together.

6 Add colour

This stage could have come much later, but I want to get a feel for the contrast of the pilot and mech. To colour the pilot I create two new layers: an Overlay and a Multiply layer. I find the Overlay layer is great for assigning colours to greyscale paintings. You could use a Colour layer instead, but I think that tends to look dull unless you use an Overlay layer on top of it, so why bother?

After the pilot is coloured, I expand the canvas to the right to give more room for the mech's left arm and shoulder armour. I also correct some minor perspective errors as I go along. While doing this, I add rough indications of a few new ideas I've had for the mech, like belt-feed bullets, new gun designs and cockpit lights.

PRO SECRETS

Save often

If you're in the habit of working to the end of an image with just one save file, you're at risk of losing your important work to crashes, file corruption or hardware failure. Having multiple save files helps to reduce that risk. If you can get your hands on some extra hardware, make sure you set up a backup drive where you can save a copy of all your work. It might seem excessive, but it may save your neck someday.



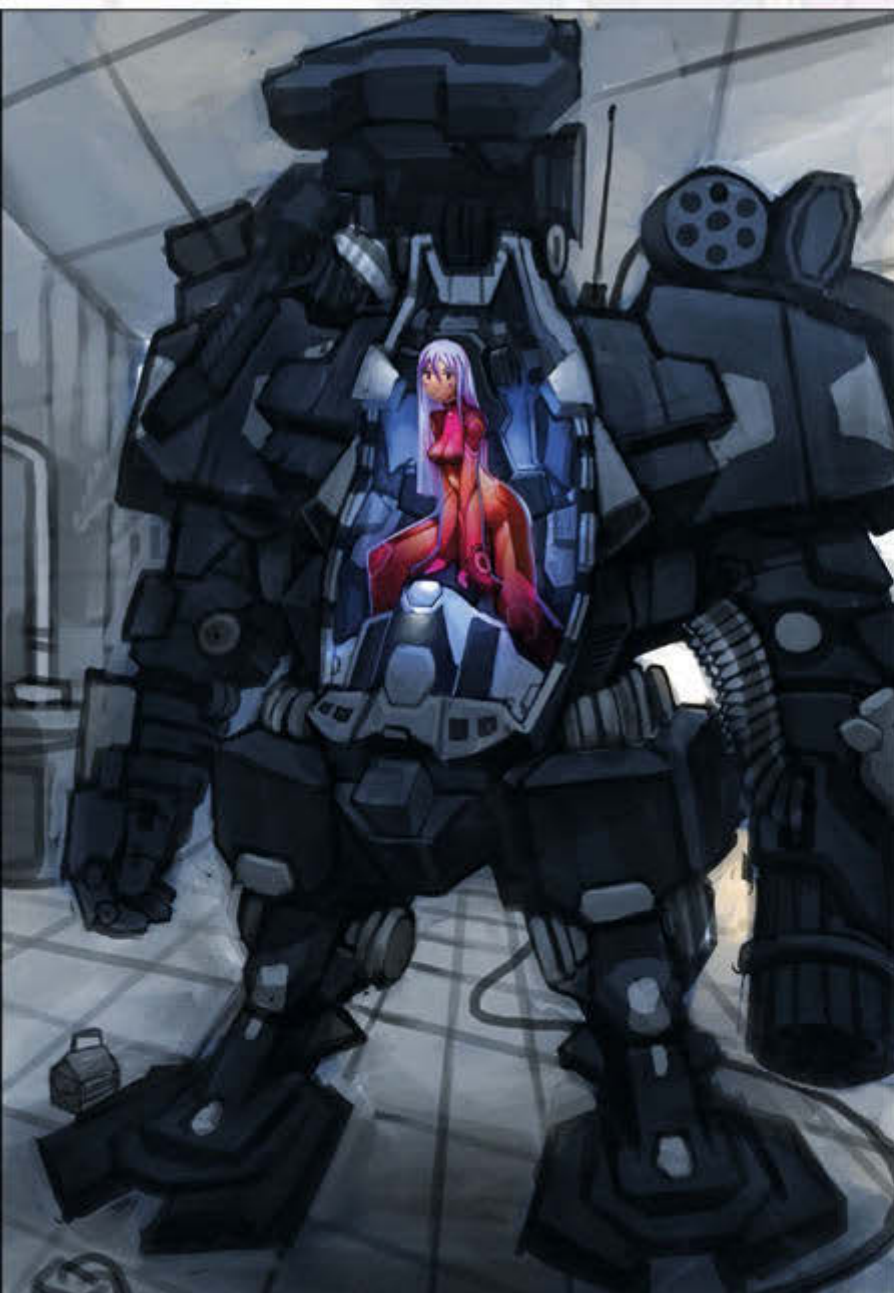
7 Fix perspective lines

I'm not particularly organised when I work, so I often end up going back to correct perspective after my initial rush of ideas. If you can avoid getting caught up in your sketch stage then I'd suggest drawing with correct perspective from the outset – it saves plenty of redrawing time later. As I correct, I think about improving my mech design, adding some weaponry and moving elements after my tweaks.



8 Add a rough background

I've already decided that the mech will be in a garage or repair shop, so I do a quick internet search to get some real-life reference. From the reference I draw in the red toolbox and fuel pumps. I also add some people to create a sense of perspective, but end up removing them later because they clutter the image. During this process I get a few more ideas, mostly for the mech's navigation mechanism. If you look at the top side of the hatch, there's no obvious peek hole for our pilot to look through, indicating this mech is a fully digital machine that gives the pilot a monitor-feed of what's going on outside. To allow for that, I add sensor spheres on both sides of the mech's shoulder, using UAV and military helicopters as my reference. I also draw a few exposed wires in the interior to echo modern-day fighter cockpits.





9 Developing the character

With all the elements starting to develop, I turn to the painting's central focus – the character. Because she'll be getting most of the attention she really needs to shine. Her immediate surroundings should be interesting as well, drawing the viewer's eyes to her. The lighting and the colour in these areas are too dull at the moment, so they're the first things I'll focus on.

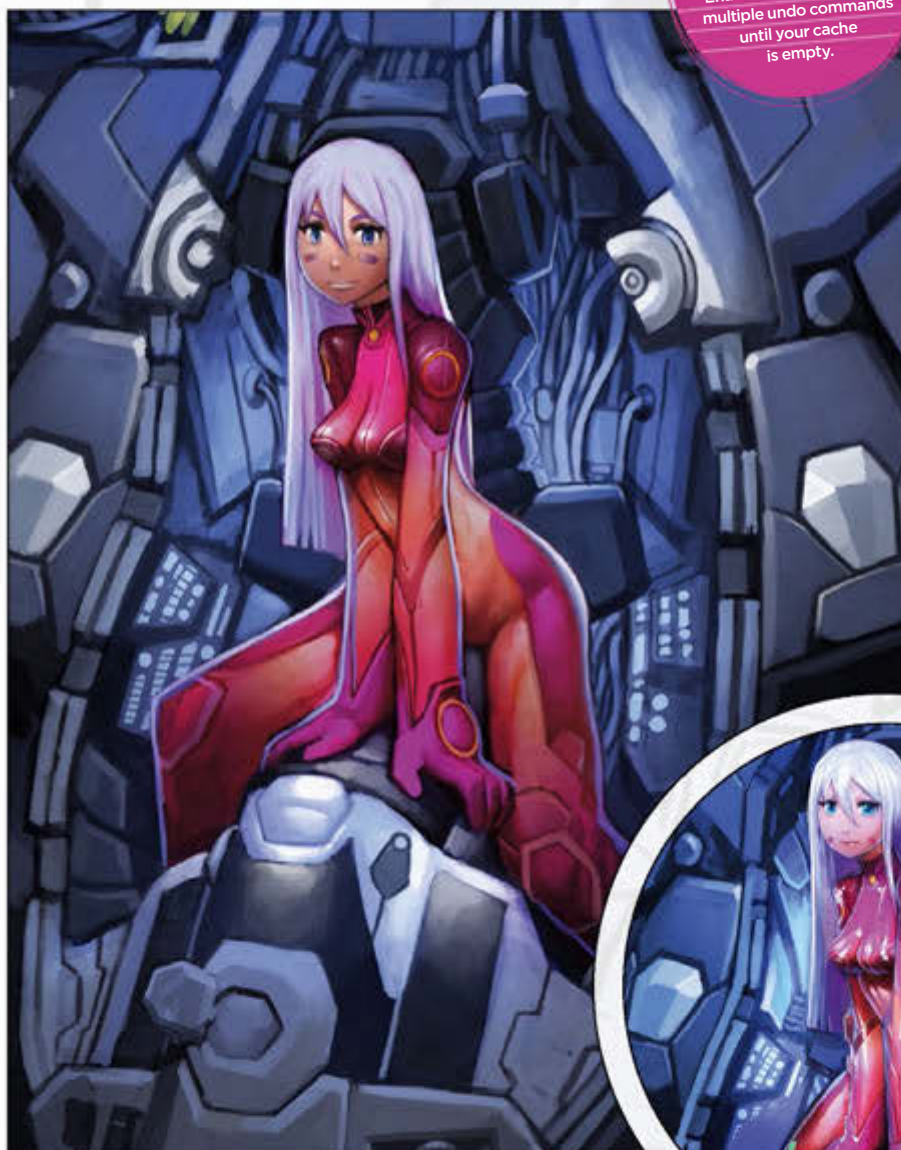
Shortcuts

Undo to cache

Alt+Shift+Z (PC)

Opt+Shift+Z (Mac)

Enables you to carry out multiple undo commands until your cache is empty.

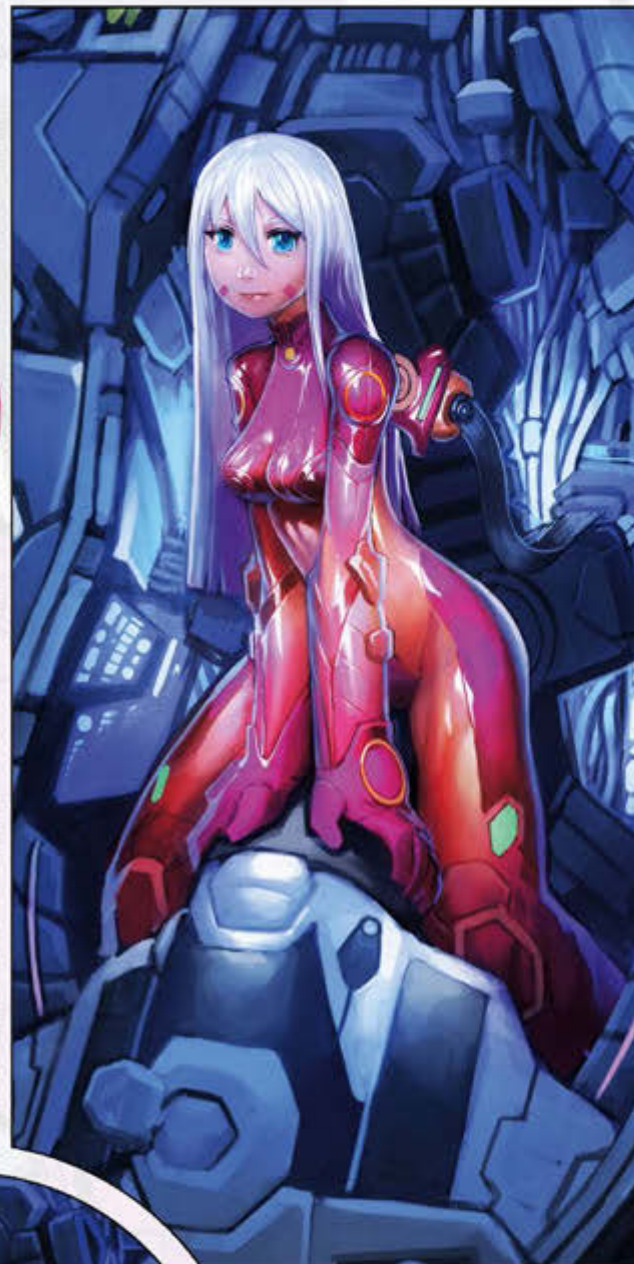


10 Altering the character

After I've brightened the colours I still feel something isn't quite right. I try to convince myself that it might be because all the details aren't in yet, but I know this isn't a simple detail problem – there's no quick fix. I think that the overall direction of this character design needs to take a slightly different path...

11 Glossing over it

Eureka! It was the gloss – I've been painting a latex suit without a gloss. It's easy to forget the simplest fact when you're hours into a painting. Taking a break to refresh your eyes and your brain can really help to identify these discordant elements. Sadly, even with the gloss, it's still not right. She's now too glossy and her posture is awkward.



12 Deglossing and fixing posture

I reduce the overall glow by taking a brush and cutting out the areas that are over-glossy. I already have all the layers flattened, so using the Eraser isn't really an option. To work around this, I pick the colour nearest to the gloss reflections and tone down each part individually.

Her posture is another issue. She was off to the side in the last step, so I use the Lasso to cut around her silhouette, Copy and Paste it, then slide her over to the left. In her new position I completely redraw her right leg and make both her arms an equal length.

Next I work on the colour of the suit, painting it a mixture of orange and red/pink on an Overlay layer. Finally, I add a data cable, placed behind her back, to complement the design.

13 Head adjustments

The character is almost done, but not quite. I suddenly realise that her head is too big. Every time I zoom out, her head sticks out like a bobble on top of a car antenna. I might be being a perfectionist, but in my eyes it needs to be fixed.

I use the Lasso tool to select the head, then resize and slide it around using Free Transform. Her hair gives me some trouble because I didn't select the bottom part of it when I moved her head. I lasso each section of hair separately, resize them and try to fit them as closely as possible to the existing parts of the image. Any colour/texture differences between the sections are painted over with a brush.



14 Developing the background

I got the rough background ready in step eight, but now it's time to take it further. Be careful not to cram too much in and distract the viewer, but avoid a barren look in your backgrounds as well. Cracks in the wall, pin-up posters, whiteboards and calendars are all characterful hints about the kind of people who work here.

After the all of the details are done, darken or brighten them as needed. I darkened most of my details (except for the outdoor scenery through the window) to highlight the mech and create a good contrast. Remember, the subject you're drawing must be easy to see or you'll lose your good work in visual clutter.



Shortcuts Full Screen mode

F (PC & Mac)

The F key takes you to Full Screen mode, enabling you to navigate through your painting without any restrictions.

PRO SECRETS

Bind your tablet keys

Chances are you've got a digital tablet. Many of these come with programmable buttons, so bind them to shortcut keys and make use of them. It may feel alien at first, but once you get used to it, you'll never have to reach down to the keyboard while working. Bind keys like Colour Picker, Hand tool, Brush Sizing and Zoom In/Out to increase your productivity.



15 Finalising details

I've achieved pretty much all of my goals at this point. All that remains is to add a few more details. I try a test patch of camo on the mech to see if it will work and redo the tricky roof of the garage to accommodate a more simplistic approach.

When finalising your painting, it helps to quarantine sections off mentally as you finish them. This kind of thinking enables you to estimate accurately when your painting will be complete.



16 Finishing touches

To finish up, a holo-interface, camo and a few other details are added to make the mech even more interesting. When you feel that your painting is done, save and close the file. Return a few hours later, open the file again and thoroughly examine your painting for any errors. You'll always find something you'll want to go back and fix. ■



“I’m going to design a flying machine based on an insect like a wasp or dragonfly”

Christian Bravery (page 202)

Vehicles

Some of the world's best concept artists have joined together in this chapter to demonstrate how to concept, create and render authentic looking science fiction vehicles. Whether you want to paint aggressive spaceships or craft exotic futuristic motorbikes, here's where to start.

Featured artists



Christian Bravery



BAFTA award-winning Christian launched and runs Leading Light, an art and design

agency that provides both character and environment designs for the video game and entertainment industries. Its client list includes Microsoft, Sony, EA, BBC2, Fujitsu, Lionhead Games and Channel 4

www.leadinglightdesign.com



Kevin Cunningham



Kevin is a freelance concept art and vehicle designer, but he began his career in a

different field, working for Honda. After that he went into entertainment design, mainly in the video game industry. He's worked for a range of companies, including giants like Virgin Interactive, Activision and Sega.

www.behance.net/kevincu

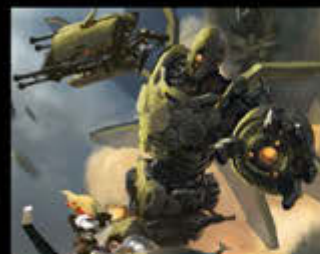


Kemp Remillard



Georgia-native Kemp is a concept artist with Massive Black, working out of San

Francisco. He has designed vehicles and created concepts for high-profile clients including THQ, Hasbro, Sega, Nintendo and Ncsoft. His current project is creating the spaceships for the long-awaited Star Citizen. www.kempart.com



Marek Okon



Marek is a Polish artist who has diversified into illustration, animation and game design.

He's created a workshop for vehicles that aims to solve the age old problem of where to start. His tutorial covers the early sketches, drafts and ideas processes that need to be addressed and acted upon to create an image.

<http://ifxm.ag/marek-o>



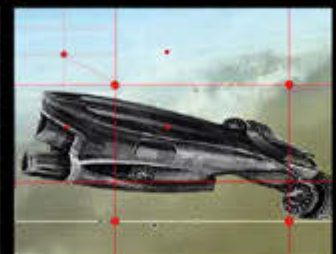
David Levy



David, otherwise known as Vyle, has built up a reputation as a leading concept artist, and has

grafted on numerous high-profile games and movies, including Assassin's Creed, Prince of Persia 3, TRON: Legacy, Prometheus and Ender's Game. He's also a founding member of Steamboat Studios.

www.vyle-art.com



Dr Chee Ming Wong



Dr Wong has over 14 years of pre-production artwork experience, having freelanced

on a range of game projects, publications and CGI pre-production artwork. He's also part of Opus Artz, a London-based concept art studio that's worked on Doctor Who, Battlefield 4 and the Dead Space sequels, among others.

www.koshime.com



Painter & Photoshop PROTOTYPE A SPACECRAFT

Dr Chee Ming Wong uses concept design techniques that will ensure a quick turnaround in the production pipeline

Welcome to this brief demonstration of transport design and how to rapidly prototype a space vessel. When asked to produce fresh concept designs for sci-fi spacecraft, you face the unenviable task of steering clear of existing styles and influences, unless specifically asked for a replica ship by your client or art director.

In this workshop I will share with you my philosophy, thoughts and process of how to rapidly prototype and build

unique iterations of spacecraft as if they were produced from the same production line. Throughout, I'll spend 70 per cent of my time discussing producing and conceptualising a good design, for this is fundamental in producing believable futuristic vehicles.

I worked for two years on the independent MMO *Infinity: The Quest For Earth* (www.inovaestudios.com), so have had to draw unique spacecraft on a daily basis, and I've filled numerous

sketchbooks and digital files with unfinished concepts, studies and designs. I find any reference to classic cars, First and Second World War equipment and transport, aviation and existing aerospace designs have vastly expanded my knowledge of transport design, which I had no prior knowledge of.

With adequate research and dedication, you too can have an informed opinion of any field of art you wish to portray. So let's get started.

Artist PROFILE

Dr Chee Ming Wong (aka Koshime)
COUNTRY: England



Chee Ming, aka Koshime, specialises in concept art and paintings

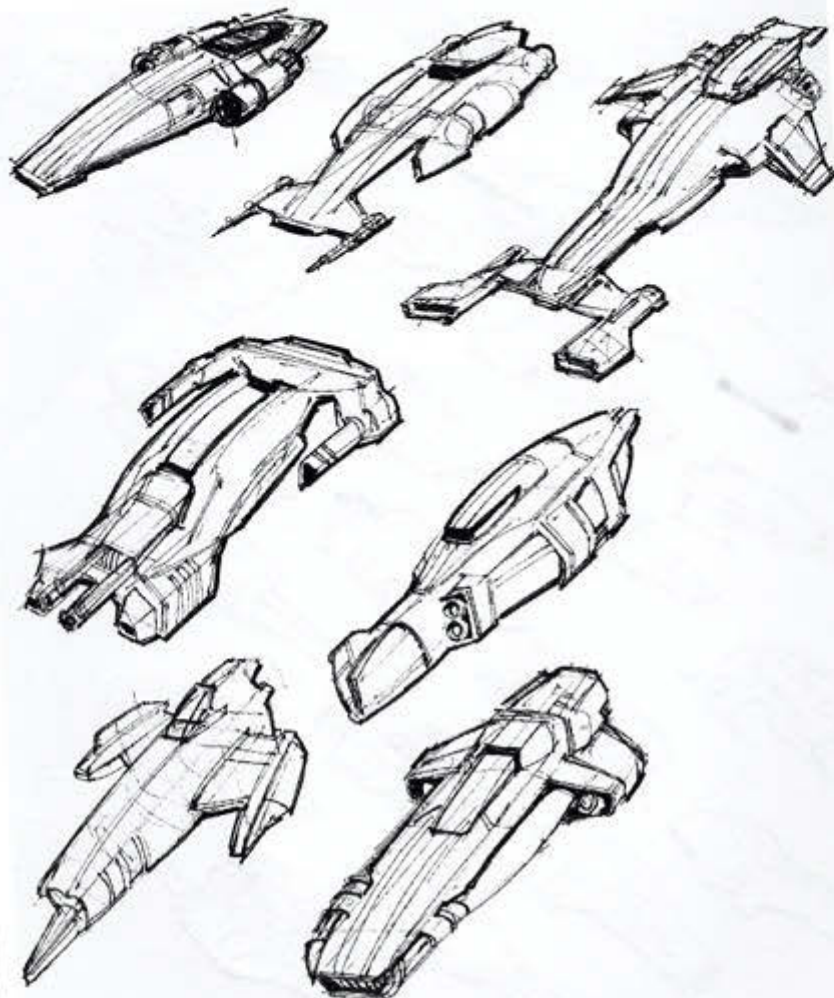
for a whole range of media, including video games, animation, pre-production, role-playing and books. He's also trained as a medical doctor (MBChB).
www.koshime.com



GET YOUR RESOURCES

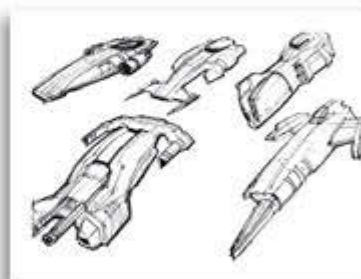
See page 226 now!





1 Thumbnails

In this initial stage the aim is to produce a design to use as a template. There are multiple approaches to this. I am going to examine the traditional approach initially, whereby a series of small thumbnails (3x1cm) are generated by hand. Think of these as small sticky notes to yourself, because these thumbnails will enable you to rapidly explore various shapes and form, and be as creatively expressive as possible.

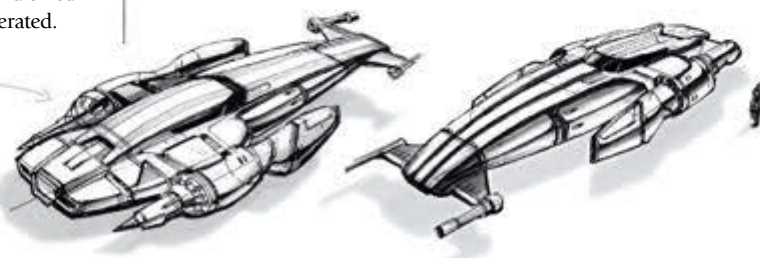


2 Improve your design

Out of your selection of sketches, the next step is to refine your process by expanding on the various thumbnails. Feel free to mix and match some of the aspects of different thumbnails to produce your first few proto-concepts (about 8x4cm). Again, try to keep these small to allow for a good six mid-sized thumbnail concepts to be generated.

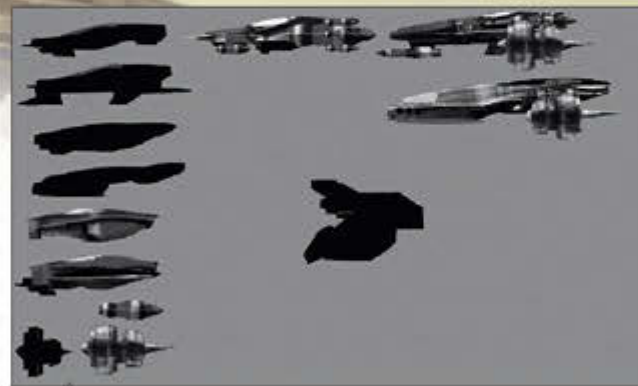
3 The concept

Now that you have narrowed your selection process, it's a good time to produce your first concept. Choosing one of the proto-concepts, try to work it up to explore various angles. A front and back three quarters view is normally sufficient for experienced modellers to use. Cross your fingers and hope that your art director gives the stamp of approval.



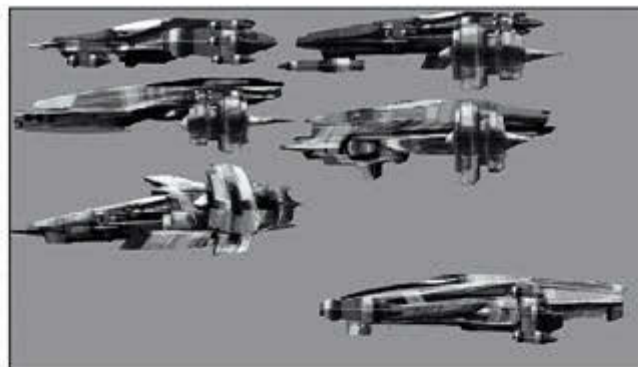
4 Gaining approval

The thing to remember when producing concept art is to try not to be too precious. Sometimes the concepts that you're proud of may not make the cut, while a concept that you have deemed unworthy is really liked by everyone. So, try not to discard any of your concepts as they may well be approved.



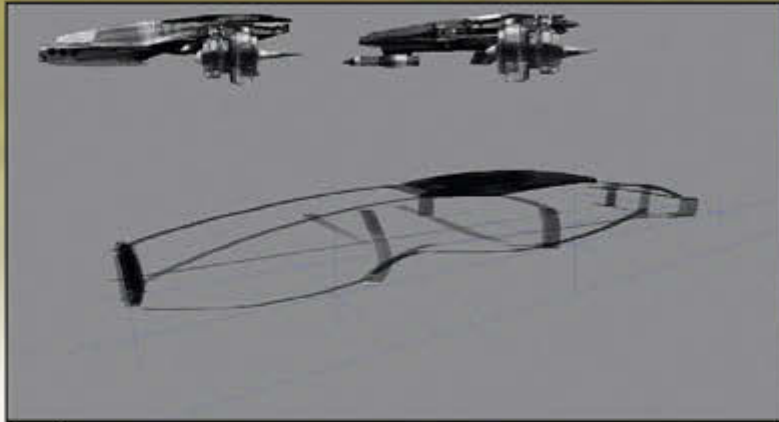
5 Visual design template

Let's conceptualise digitally using your favourite painting software. In parallel to the traditional method, I'll build a visual library of shapes and forms that we can use to produce prototype concepts. Using this process I can produce many ship parts, including engines, guns or ship chassis and build a concept together like digital LEGO. Remember to utilise any detail or shape that you have used to build each prototype. For example, take the nose from one shape and engine detail from another and cobble together a new prototype. You can use any canvas size, but it's best to start with a 150dpi initially.



6 Concept prototypes

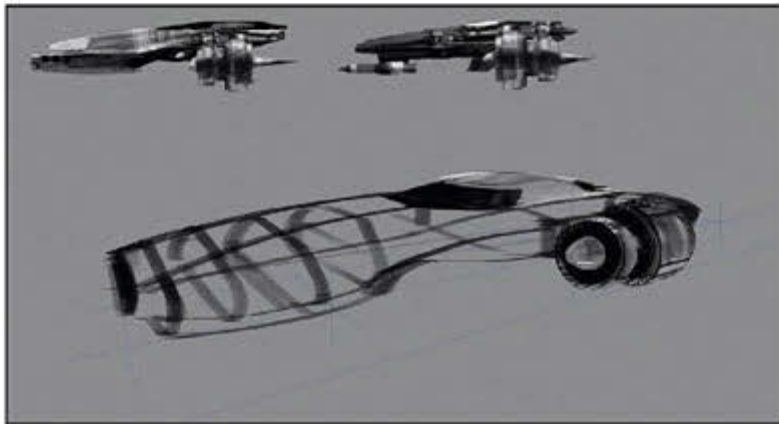
You can rapidly build a whole production line of ship designs by conceptualising in greyscale. It is important to remember that minor details are all that is required at this stage. With each iteration, the prototypes will gradually become more detailed.



7 Isometric projection

I select one of the prototypes to work on. I shall be producing an isometric three-quarter front view. It can be useful

to plot out a freehand perspective beforehand – I'll use a simple two point perspective here. Using this, I draw out a simple spline outline of the concept.



8 Shipbuilding

From the middle, project outwards on both sides to produce a skeletal frame or chassis that you can paint flat layers of metal on to. This is akin to building

vehicles in real life. A good example is the bare hull ribbing of old sea-going ships. When you've done this, start to conceptualise your ship's engines and begin to add some minor details.



9 Skinning

Make a new layer and start to block in flat shades of grey over various sections. This is akin to adding metal plating to a ship. Try to envision welding together various strips of metal on to a ship and your concept will come to life.

Shortcuts

Duplicate to new layer

Alt+V (PC)

Option+V (Mac)

This duplicates your selection on to a new layer.



10 Adding details

I utilise a Palette Knife throughout to easily paint in flat washes of grey to simulate metal plating without having to resort to using photo textures. In Photoshop, you want to make a flat horizontal brush with pressure support. In Painter, a whole array of Palette Knives already come pre-built.

PRO SECRETS

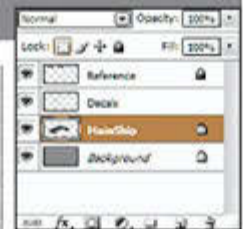
Smudge tool

This tool is sometimes under-used and has multiple roles and effects. The Smudge tool set to 80-100 per cent with the default Hard Round brush enables you to do basic correction (using the Lighten/Darken option), paint straight or curved lines and even carve into pictures. Set up correctly, you can paint and detail any picture using this tool.



11 Decals and dirt

On a separate layer I try to add decals, dirt and some basic highlights utilising a simple Dirt brush or the default Hard Round brush in Photoshop. To make racing strips, use a simple rectangular selection and fill with 20 per cent Opacity grey. This can later be adjusted via the Transform tool into any perspective or shape.

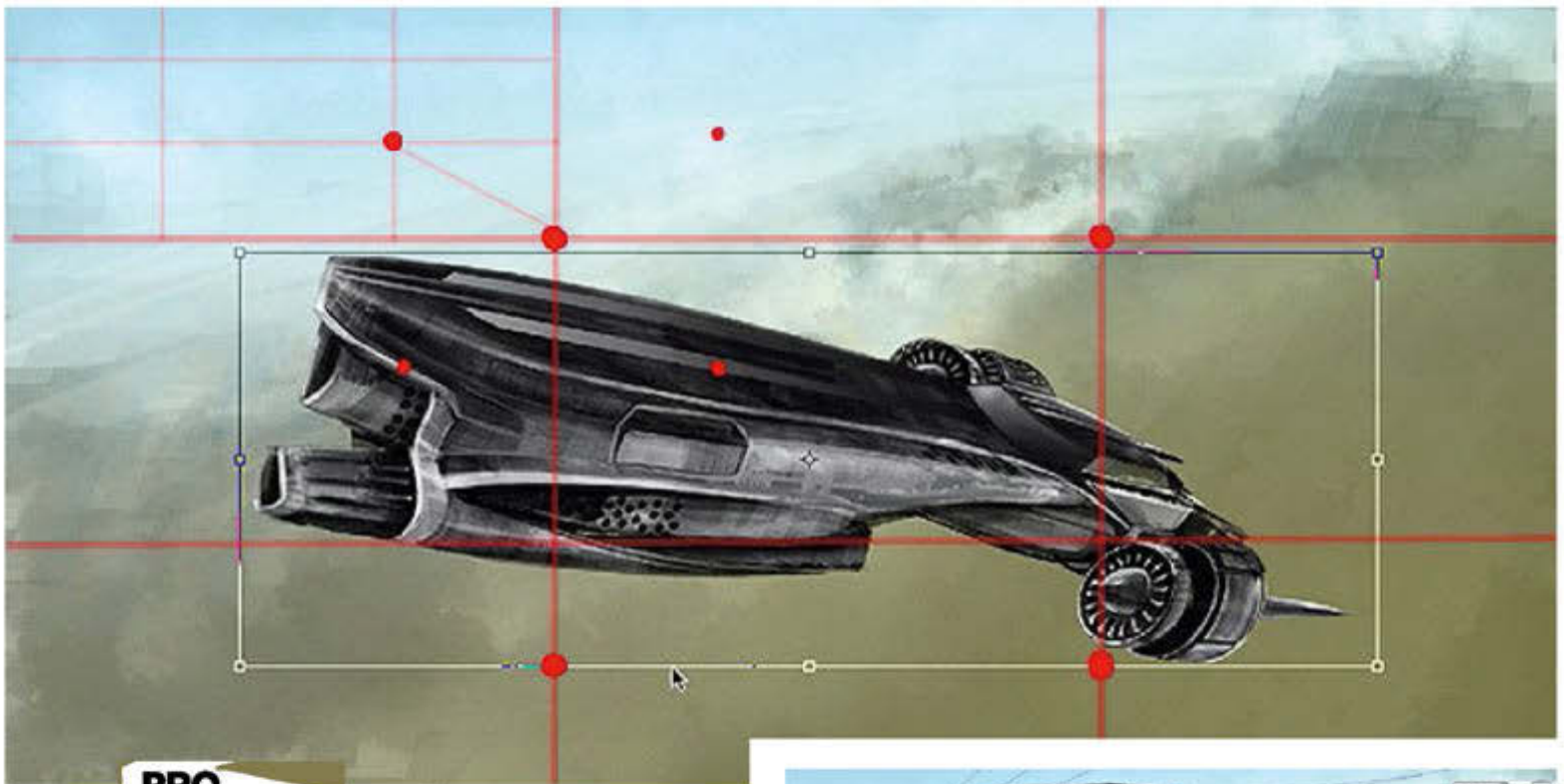


12 Painting clouds

I want to show off the three different concepts in the air, and decide upon an aerospace setting above the clouds. Using a simple Airbrush (or Dirt brush), you can rapidly paint in abstract shapes to produce a varying contrast of cloud shapes. I would advocate studying reference of cloud formations if you are unfamiliar with this subject matter. Either that, or go outside and look up...

13 Background colour

Finally I can start playing with colour for the background of my spacecraft. Depending on the composition and mood, colour can determine the effect the final illustration projects to the viewer, affecting how it makes them feel. You can add colour to a greyscale image via many options (including Colourise Layer, fill in a new layer with a flat colour and adjust Opacity, or the Black and White Adjustment tool – for more on this handy tool, see the Pro Secrets box below). In this instance, I opt for a complementary colour set, which will help my finished spaceship concept to stand out.



PRO SECRETS

Greyscale to colour in only two clicks

Photoshop has an adjustment option called Black & White (Image > Adjustments > Black & White). With this, you can adjust the value of your image and apply a colour tint – all in two clicks. For advanced users, if you utilise this adjustment via the Adjustment Layer and inverse the adjustment (via Ctrl/Cmd+I), this now makes your Adjustment Layer into a pseudo Alpha Channel, whereby you can paint in your colour tint manually, or via the Gradient/Fill tool.

14 Composition

Using the Rule of Thirds, the aim is to place the main hero vehicle near the viewer, and the other two concepts on any of the four areas on a canvas. To explain, you can divide a canvas into thirds which produce four areas of importance or focus to an illustration. If you subsequently divide each of the nine sectors into thirds, you generate another four focal areas around each major third. To put it simply, you can locate objects near the Rule of thirds and produce brilliant results.

15 Perspective grids

To aid the composition, an arbitrary two-point perspective is placed on the canvas. This is determined first by the horizon line. In this instance, we have used a dynamic composition and a top down view, and thus the horizon line is skewed six to eight degrees from the horizontal. Subsequently, you can plot the primary vanishing point using the Rule of Thirds to lead the viewer into the illustration.



Shortcuts Reassign your shortcuts

Reassign your shortcuts for easier access and workflow. I have F1 assigned to New Layer and F2 to Duplicate Layer.

16 Painter brushes

I like the painterly quality you get in an illustration from using Painter's brush set, so at this stage, I flatten the whole image and port my .PSD to Painter. Within Painter, I want to access the Blender tools to paint in soft clouds and far off details. For closer details, the Natural brushes and Oil brushes are good for working on areas including the ground surface and mountain ranges. When it comes to painting the metal, a mixture of Oil brushes and the Palette Knife will add to that natural realistic look, giving your craft a believable texture. In addition, the lighting tools enable you to globally add coloured spotlights to your illustration.



17 Mood and atmosphere

The final stages of any illustration are to add atmospheric perspective, whereby some additional haze and cloud layers are added to objects in the background and mid-ground. A study into various jet and exotic aircraft contrails leads me to decide on combining a pulse detonation engine (which produces a doughnut on a rope contrail) and XCOR Aerospace Methane test engine (producing a distinctive diamond blue flame wave stream) set of contrails to create a futuristic engine wake. It is tiny attention to detail that helps sell an image, and as a gross simplification the secret to believable design is a ratio relating to on 70 per cent based on existing design/reference and 30 per cent based on imagination.

18 Final touches and details

In this final stage I up the resolution to 300dpi. You can now laboriously add all the detail, textures and minor perspective corrections to your heart's desire. This stage can take up a good many hours, days or even weeks to make the image as realistic as possible. If you desire to add further intricate details, I would suggest selecting an area to copy and up the resolution to a new file. There you can paint in textures, dirt or details if you so wish. Once finished, you can lower the resolution and re-import into the original illustration. Once you are pleased with the final result, flatten and save.





Photoshop DESIGNING ORION

Kevin Cunningham invites you to get on your bike as he shows you how to concept and paint a futuristic motorcycle

Artist PROFILE

**Kevin
Cunningham**
COUNTRY: US



Kevin is a freelance concept art and vehicle designer, but he began his career in a different field – working for Honda. He has worked for many clients in the game industry.
<http://ifxm.ag/kevincu>

**GET YOUR
RESOURCES**

See page 226 now!

There are a variety of factors to consider when designing motorcycles – for me, the whole process usually starts off with a question. Will it actually be built into a real object that exists in the real world, or is it going to be a design that is wholly from the imagination and completely fictional?

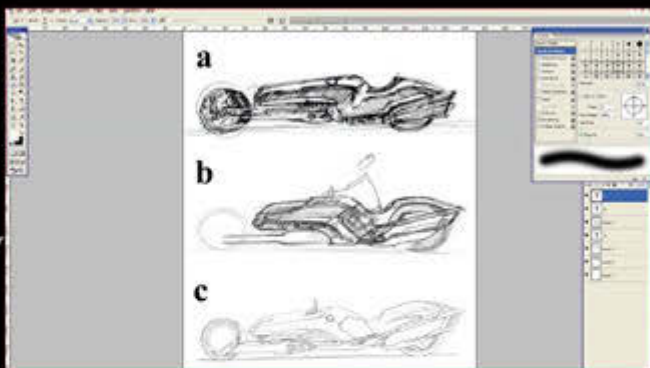
In my experience with designing vehicles for both Honda (the real world), and EA (entirely fictional), my starting points are completely different. With Honda I'm given a detailed mechanical layout created by engineers that shows me

where the engine resides, and gives me frame geometry points for the steering head and rear swing arm as well as the wheelbase. These factors are critical to how a bike will handle, and are very important for safety reasons. For a fictional world like one you'd find in a video game, the importance is not so much how the bike will handle as how cool the design looks. Regardless of which scenario you're designing for, both will usually require a fair amount of research.

This research usually consists of looking through hundreds of images that will help me with design inspiration, the mechanical

details, and the accurate depictions of shapes, forms, materials and lighting. At the same time, I'm also considering the environment into which I will be placing my design – be it an outdoor setting or a photo studio – because each has its own distinct look. In this instance I'm using an outdoor setting because I prefer to showcase this design into a much more realistic environment.

This workshop will take you from a rough sketch to the refining of the completed design, and will largely focus on techniques to render your line drawing into a believable product.



1 Concepts

Here is the progression from the first ideation sketch to the final line drawing. Sketch A was created with the idea of doing a bike that drew inspiration from old cafe race bikes, with long tanks where the rider sits close to the rear tyre. In sketch B I'm finding the main character lines and refining the design of the first sketch. Here I start to see the frame becoming more of a visual design element and not just a



structural frame that has been hidden beneath some plastic.

The final sketch and line drawing, sketch C, is ready for rendering. The frame is now a major element of the design and it separates the bike into three sections: the top of the cowl, the lower faring section and the rear seat.

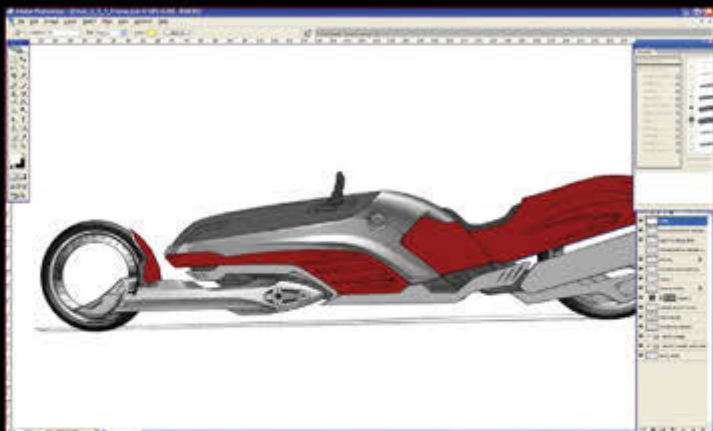
2 The journey begins

I begin the whole rendering process by taking the Line Drawing layer and changing it from Normal to Multiply. This layer remains on top of the layer stack so I can always see my line drawing during the painting process. All subsequent layers will remain under this layer.

I quickly render the tyres with only two layers – one for the outside of the tyre where it makes contact with the road, and one for the inside of the tyre where it meets the rim. This way I can easily shade one tyre with the Dodge and Burn tool without affecting the other. The wheels and brake disc are on their own layers as

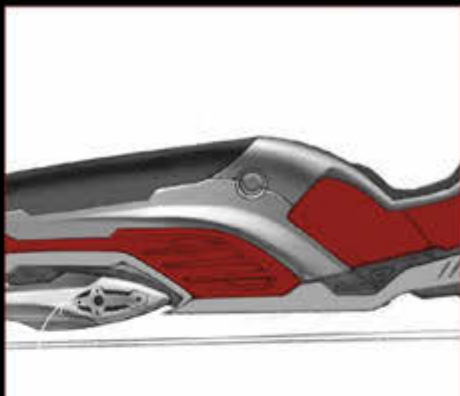
well. I also know that once I have one tyre and wheel finished, all I have to do is copy those layers and scale it up for the rear. I also quickly block in the rest of the bike, and for the first time I see how it will all look graphically. Putting the Frame layer on top of the bodywork layers means I don't have to worry about how clean the Bodywork layer is when it meets the frame, because it's underneath it. I don't really mask much, so I try to get my layer ordered in a way that helps facilitate that. Be sure to never paint on these blocked-in layers, as you will need to come back to them a few times during the rendering process, so it's good to always have them just in case. ➔





3 Orion's belt: Rendering the frame

I start rendering the frame first because it's a pretty flush fit to the upper cowling and rear seat area. I duplicate the frame layer that I will be painting on, and lock the transparency of the layer so that I only affect the painted area. I use a larger brush with the Hardness turned all the way down, and I start by Dodging and Burning in my light and dark areas as I start to develop the form of the frame. Once it starts to look pretty close, I move to the front swingarm and use the same techniques that I used to render the frame, because it's made out of the same material. If the shape isn't quite right at this point, keep tweaking it until it looks just as you want it and refer to your reference photos if you need to.



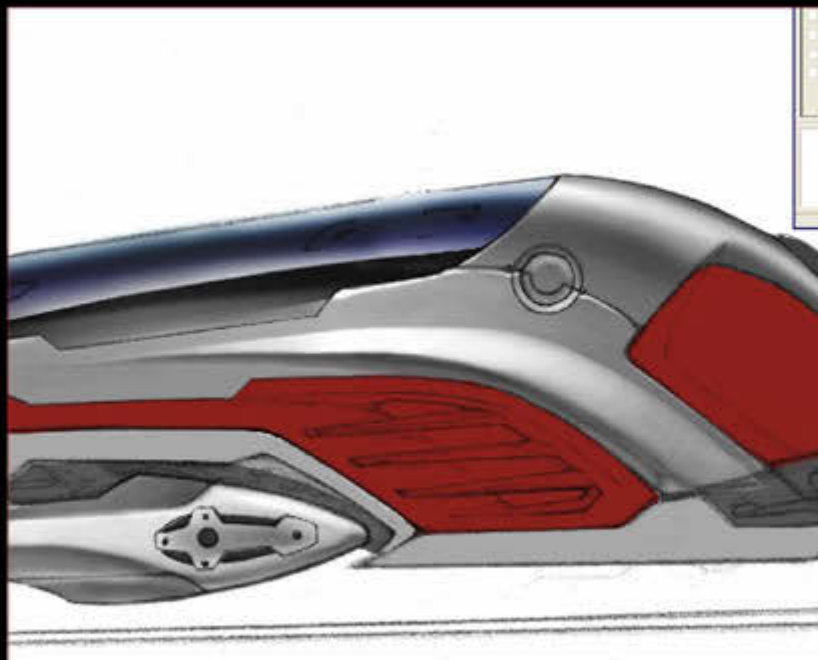
4 Glossy surfaces

For the core, I start with the upper grey tank area first. I copy the base grey layer that I'll use as my core, which will be the sky reflection area where the sides of the tank roll over to the top surface. Instead of trying to airbrush that shape in I wanted more control, so I darken that duplicated layer and I erase out what I don't want. I use the 30 brush with no hardness and my Opacity set to 20. Once I have the core that I want, I duplicate that layer and use Hue/Saturation with Colorize checked and shift it to a blue sky tone. I copy the first black core layer again and repeat the steps to change the colour to purple. I erase out a

PRO SECRETS

Flatten an image, keep your layers

Sometimes you want to flatten your visible layers to do adjustments to them, but you don't want to lose them all. To do this is I Select All, and copy and paste. What you'll end up with is one layer that has all your visible layers flattened and pasted into it.

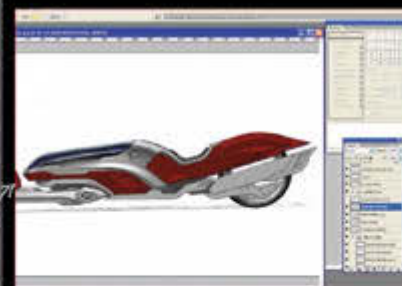


little of the bottom of the blue core to show some of the purple, and the top of the purple to show some of the blue. I use blue on top, as it will reflect the sky on the top surface of the tank, and I go with purple to warm up the core a little to help make the surface turn from the top of the tank to the sides. I take the black core that I created earlier and place it on top of the blue and purple layer, and I now have my core so I can get to the reflection.

Ctrl+J (PC)/Cmd+J (Mac), and Merge via Layer to take my selection and duplicate it into a new layer. I want the reflection to go from dark on top to lighter on bottom, so I use Dodge and Burn to achieve this.

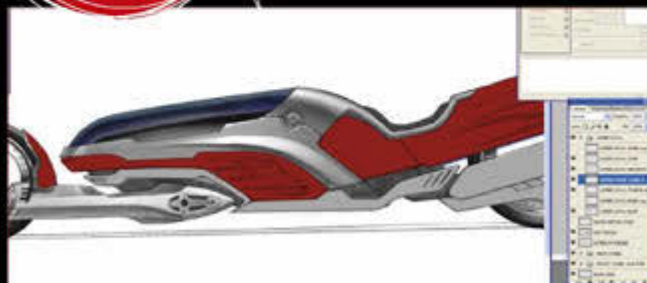
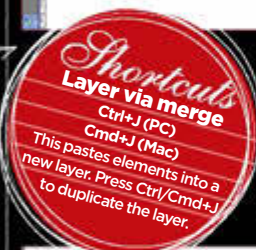
6 Add the shine

To make something look shiny, leave some white between your core and reflection, and between your core and the very top of the tank. To do this I copy the base layer again and, with the Dodge tool range set to Midtones, I put in my white areas. It now looks a lot shinier and I can call this area done.



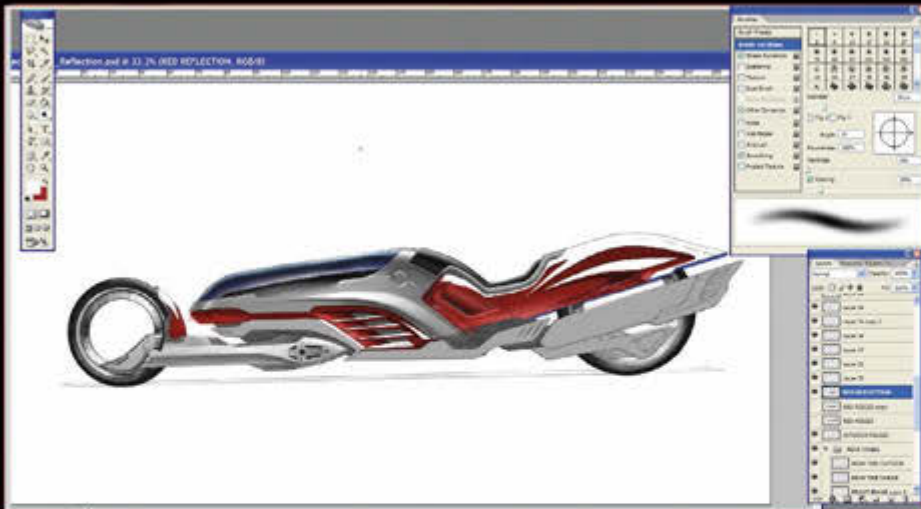
5 Reflection

To create the reflection, copy the base grey layer again and place it below the core layers. I use the Polygon Lasso Tool to carefully select my reflection, then I hit



7 Seeing red

The red parts of the bodywork are created in the same way as the black part, but I flopped the sequence by tending to the reflection first, then the core and then the white areas. The surfaces are a lot more complex in this area, so I need to make sure they are reading correctly, and the reflection will show me that. I also use the Pen tool and create a path where I don't want the red, then right-click with the pen tool still selected, which brings up a menu selection. I choose Make Selection and hit Delete to get rid of it. Make sure you close your path before making a selection.



don't forget that you have it hidden because sometimes it can get frustrating wondering why your brush isn't working when you have your selection hidden.

12 Background highlights
I can see the light at the end of tunnel now, and it's time for the highlights. In your brush selection menu, click on Brush Tip Shapes to bring up all your brush settings. I make the brush into an oval shape, manually rotate it to the angle I need, and paint in highlights where they hit the bike. Be careful not to overdo it or it will look like your bike has been dive-bombed by birds. The background is created using the Gradient tool, which is very straightforward to use. I go with a cooler background to help push it back and help pull my design forward. Keep the background simple because you don't want it to compete with your design. After adding in some graphics with the Text tool, I name the bike, sign it, and call it done.

PRO SECRETS
Transforming a selection
I use this a lot when I'm doing a circular selection for selecting a bolt or the tyres. Just drag out an Elliptical Marquee while holding down Shift to get a perfect circle selection. Go to the Select Menu and from the drop-down menu click Transform Selection. Now adjust it just as you would with the Free Transform tool.



8 Further details
I add in some detail to the reflection by selecting areas with the Pen tool, duplicating them on to another layer, and then darkening them with Levels. I also Dodge the bottom of the reflection to lighten it and create a dark-to-light fade – and the reflection is done.

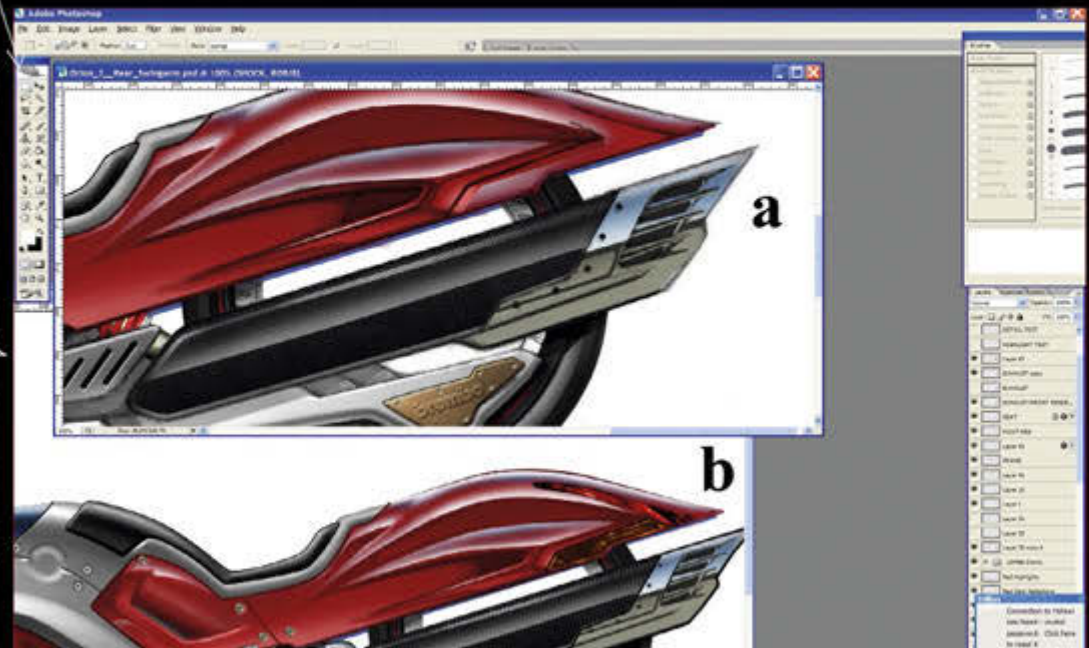


9 More redness
I now repeat the steps that I used to create the core for the black tank and upper cowl section, but eliminate the purple from the core to leave more red. Then I add my white in.

10 Exhausted
The final parts are coming together, and all the major surfaces and materials are reading correctly. I finish up the exhaust quickly (Image A). Find an image of a carbon fibre weave online if you don't already have one. Free Transform the carbon fibre piece to get the weave to the right size. I render it in the same way as the red bodywork, using my carbon fibre weave as a base. I quickly design a chrome tip to cap off the exhaust. All the research I did

earlier is going to come in very handy during the detailing phase. Detailing out a traditional drawing usually means just indicating some quick details, but now I can grab little pieces from images of motorcycles that I've taken over the years and start pasting them into my painting to give it that third read that keeps drawing the viewer into my design.

11 Final line work
I use the Pen tool to add my final line work in (Image B) and set my brush to a Hard brush with the Shape Dynamics box checked. I stroke the path with the Simulate Pressure box checked to get the line to fade at the ends. I use this for surfaces that face upward and I uncheck it for lines that face downward to thicken it up. Sometimes you have to stroke it once or twice to get the right thickness, and hiding your path by hitting Ctrl+H (PC)/Cmd+H (Mac) can help you see it easier. This works really well for selection masks as well, but





Photoshop

DRAMATIC CONCEPT ART

Leading concept artist **David Levy** shows how to paint an environment piece that's full of drama, using custom brushes

Artist PROFILE

David Levy
COUNTRY: US



David began as a concept artist for the video game and film industries. He was also a founding member of Steamboat Studios, which he set up with his good friend BARONTIERI.
www.vyle-art.com

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Creating dramatic concept art means capturing the correct mood for your piece. The mood that I'm going to try to achieve in this workshop is one of a nuclear winter, which still has a poetic atmosphere to it. Opposing or contrasting ideas always make for great painting subjects, and a saturated winter is not a very common way to approach an image. With that rough idea and direction, we will let chaos direct the first part of the painting, then slowly give it a meaning and a more concrete perspective, lighting and mood.

For this workshop, I'll start using the same brushes I created for the Gnomon DVD From Speedpainting to Concept Art, but will also create new variations using the Dual Brush settings.

Before starting this kind of exercise, it's important to have a good knowledge of perspective, composition and lighting. Without these basics speed painting can be frustrating, as speed and technique only come with practice. Nevertheless, there are rules that make the job easier, and atmospheric perspective is one of them. In most environments (aside from space) the atmosphere acts as a filter and

creates a hierarchy in contrasts. I'll use that rule to emphasise the atmosphere in my painting. I'll try to imagine what a somewhat sad mood mixed with a futuristic space-situated design might look like.

The Dual Brush feature will help me create elegant shapes that will disappear in the depth of the fog. The tools used might seem complex, but their use is based on classical painting techniques. I'm going to overlay colours, starting from the background, slowly moving forward and finish close to the viewer's eye, as a painter using oils might do.

1 Background

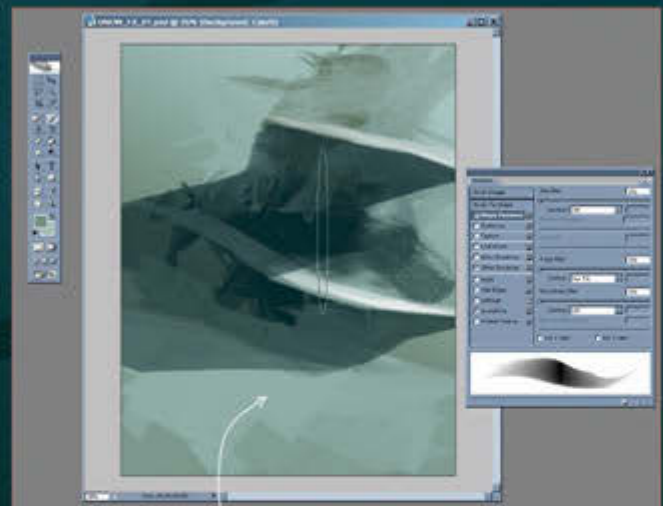
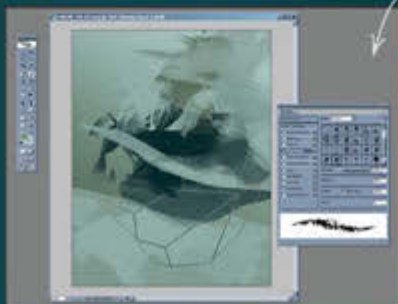
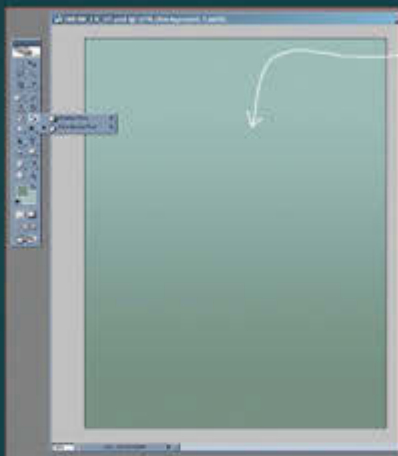
Let's start with a medium green gradient from top to bottom of the image. I decide to keep the brightest area on the top, which influences the way light will appear in the final image. At this point I have no clue how that painting will unfold in front of my eyes. One thing is sure, though. With a vertical composition, I have the possibility to create a large building in the background. You shouldn't be afraid as you begin your image – be relaxed and enjoy yourself.

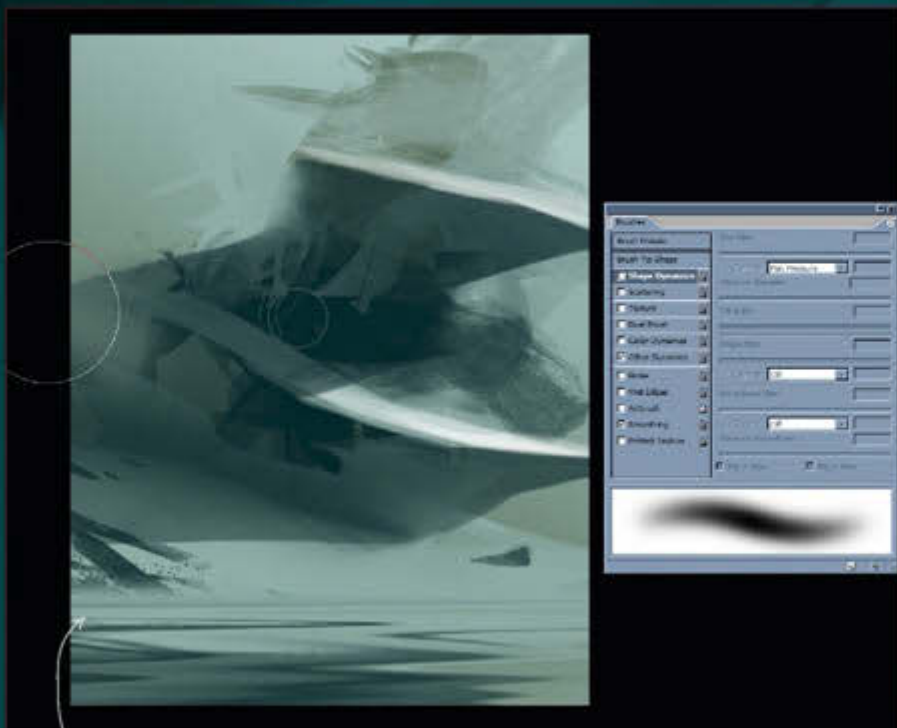
2 Basic shapes

I try to let the brushes go free as much as possible. I know that I need some rocks, a metal structure for the vessel and some soft gradients for the nuclear snow. I don't even look at the page during this process, just let myself be surprised by the shapes. When I look, I can already see a foreground and a background shaping up. This happens thanks to the variation of opacity and contrasts giving, the illusion of depth. I already sense that this off-axis composition could be something that plays to my advantage.

3 Shapes come to life

Using a Palette Knife brush I add two bold strokes of dark blue/green. Suddenly a large mass appears and textures are exaggerated during the shadowing process, giving a feeling that something high-tech might be lurking in the fog. The sharp edge on the right side reminds me of a vessel's prow.





4 Perspective

Using the Selection tool and the Rock brush from my set of custom brushes I decide to push the perspective by using rocks lying underneath the ice closer to the viewer. At the same time I make sure to exaggerate that off-axis composition by opening that embryo of perspective like a fan from left to right. These rocks will help the eye flow from foreground to background in a single and comfortable manner. I am starting to wonder how will I be able to balance this weird drop of composition to the right.

5 Fun with fog

I decide to have a bit more fun with the fog, and get the sides of that silhouette to disappear in the mist. I find the best way to balance the whole image is by layering a nice, straight horizontal plane at the bottom of the picture. The composition now feels more balanced, and that sharp edge on the right keeps looking more and more like a prow. I think it is about time to give a wash of reality to the rough sketch.



6 Connecting circle

I exaggerate that light coming from the right side by sculpting some white cap-like shapes, and by also adding a shine to that slab that I decide is going to be ice, thanks to a soft/sharp reflection. I toy with the idea that the connecting circle that I created in the middle of the



more heavily textured area close to the centre might become the viewer's main focal point.

7 Blowing snow

I add to those dark patches of texture, using the Selection tool and a newly created Dual Brush. I also decide to simulate radiosity underneath that mass with a soft but obvious dark airbrushed line. Close to the prow, I intensify the brightness as it gets closer to the bright snow. I decide to soften the snow and ice contact area using the Airbrush again, to give it a feeling of blowing snow.





8 Adding scale

Time to give punch and scale to what is now seriously shaping up like some futuristic prow of a spacecraft carrier. I throw in some design markings on the top right part to give a sense of perspective, and straighten the line so it looks like it has been man (or alien!) made. I repeat the same operation on the level underneath, making the shadow line more obvious. At the bottom I add two characters that will give an indication for the ship's scale.

9 Circle focus

As I said in step 6, I think the connecting circle will make a great focus, so I work on the materials in the shadowy area. The lighting effects give the illusion of an eerie, unknown reflective material. That highly saturated yellowish green seems to work well, and will help develop



the texture of the ship further. I really dig into the pixels in a close-up, revealing a lot of blurriness/sharpness variation. That will probably have to be fixed later on during the polishing phase.

10 Texture

Working on the design of the texture feels different from the high adrenaline of trying to come up with shapes from chaos. The shapes come up by themselves, but I need to make sure I follow the overall volumes decided earlier on by the brushes and light gradients. I also have to be careful about

PRO SECRETS

The importance of basics

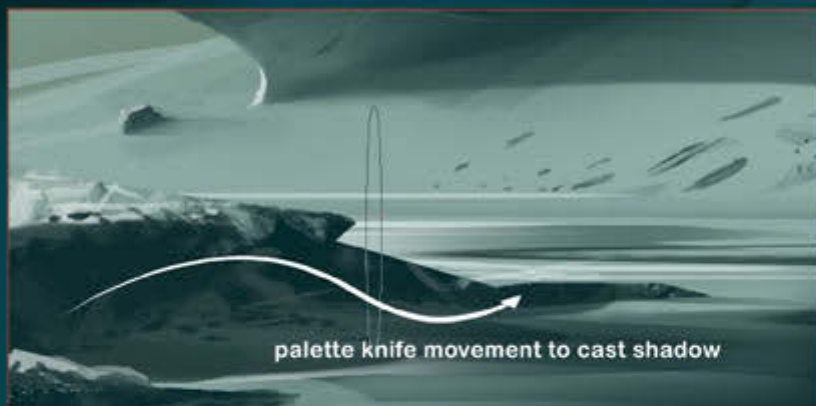
I have noticed on many occasions that many students tend to try to run before they can walk. Most of the digital tools that enable us to paint nowadays are extremely powerful, but one thing not to lose sight of is that a classical background will always make the difference. Even though you have a whole set of powerful digital tools, it is only by practising the basics that you will be able to use them to their full potential.

the shadow-to-light shifts that affect the materials. The shapes again seem to take a life on their own, and the circle now resembles the eye of a mystical whale.

11 Whale image

I exaggerate the back of the ship, by making it resemble a stranded whale on that strange green snow. I also have some fun designing a pattern on the back of the mechanical beast. That helps with reading the volume, and also makes the viewer believe that there might be much more there than what the eye can see. This is important – after all, if you detail everything, how can the viewer dream? I add clouds to the top left corner to play with the scale again, and also give a nice framing to the centre of the illustration.





palette knife movement to cast shadow

12 Foreground in focus

It's time to think about the foreground. I need as much space as possible to eventually add some characters to my scene, and help the viewer jump into my image. A slab of snow-covered rock is an easy way to add depth and an instant foreground element. I also add some texturing designs at the front of that ship. Adding highlights where the ship and snow meet gives a nice indication of where the light falls. I flip the image over the vertical

axis, and use the Palette Knife to gently cast a shadow on the side and underneath the rock.

13 Tiny ship

I decide to add another ship in the foreground as this craft's tiny proportions will emphasise the scale of the giant vessel even more. I use the colours already present in the painting with the colour picker, and I also add a very vibrant red so the image has a new point of focus – now slightly closer to us. I

PRO SECRETS

Customise your shortcuts

I like to customise my own shortcuts using Edit>Create Shortcuts, as well as the Actions option in Photoshop. Here are the few I have set up. Though there are shortcuts for these actions in Photoshop, I prefer to have them somewhere logical for me to use as I work. Clicking F9 creates a new document in one click. It gives me the size and format of a new file, and a basic name, but you could go even further by dropping in a basic background colour and so on. When I hit F5, it creates a new layer (Layer>New Layer). I like to organise common shortcuts at the most logical place for me to get at when working. You could also set them up on your Wacom.



accentuate the light on the top right, and add in details including the landing gears and reactor. Then I cast the new ship's shadow on the ground.

14 Fresh eyes

I zoom out to check that the composition is working with this new element and flip the image quite few times to keep my eyes fresh. This is probably a good time for me to take a break and go and get some coffee, as it's important to keep an objective view on your work – especially in a speed painting when things happen fast. Now the speed painting is pretty much done. From now on, it is going to be much more about polishing and sharpening the details. To give the piece more punch, I add a Multiply layer to the whole image. This enables me to slightly underexpose my image, without losing detail.

15 Sculpting light

Now that the picture is darker, it's nice and easy to sculpt light on the sharp edges of the ship. The light coming from the top right, which cast shadows earlier on, helps me decide where to place those.





16 Add a figure

I add a character to the foreground to make sure the viewer's eye has a point of entrance to the picture, but also to keep that eye focused in the middle of the image. That rock ledge seems the best place. Maybe he is looking at some data on his computer or checking the view.

17 Add reflection

I zoom out a little bit to paint the icy shore, and add the water reflection close to the camera. It is a nice trick to make the image even more three dimensional. Even though I used a long focal lens for the image, adding those foreground elements is what gives a strong feeling of perspective contrast with the background.



18 Final polishing

Now all that's left to do is to polish the image and do the final tidying up. I clean up the foreground rock by zooming very close and softening anything that might distract the viewer. This is the time to smooth things up using the airbrush, or add even more detail using the round brush.

19 Finished image

The image is finished. I managed to get the result I wanted: a dramatic image with a strange mood that has an alien beauty to it. The fact that the characters don't look like they have any sense of urgency helps confirm to the viewer that the scene is calm – if it were not for the gusts of wind that raise, from time to time, a cloud of toxic snow! ●



Photoshop STARTING FROM SCRATCH

Don't be put off by the sight of a blank canvas. Treat this as a golden opportunity to stimulate your visual imagination, says **Marek Okon**

Within this workshop I'll explain my initial stages when creating a new image. For some people, painting is like going from point A to point B, and their initial sketches look almost exactly like the final piece – down to a dead-on colour palette. I, on the other hand, like to experiment a bit, do some searching while painting, and try out some new things. It's not always a straight road and you have to turn back a couple of times, but as long as you have a handle on the process you'll be fine.

The truth is that you can start a good painting not even knowing what you want to paint – just a few random brush

strokes can stimulate your imagination into creating a wonderful image. That's why those first few steps on the road to a finished picture are totally individual to each artist – and like everyone else, you have to find your own way, one that best suits you and makes your creativity flow.

For starters, white canvas can be a pretty scary thing as it just sits there, staring at you, asking, "What do you think you are doing? You think you can paint on me? Seriously?" So the first thing you should do is to get rid of that annoying white colour. I use a gradient tool and apply two or three colour mixes that establish the overall mood of the picture. You can also use greyscale if you prefer.

1 Simple shapes

Some people start working with colour straight away, but I usually begin with very simple shapes and shades. The subject of the image is a giant robot chasing an action-hungry couple on a jet bike. The whole thing should have a distinct adventure feeling, so I use retro-future style for the robot and the jet bike. I'm also going to use an armada of old-fashioned blimps in the background, just to add a hint of storyline to this setting.

2 Rough sketches

As you can see, my initial sketch is rather rough. In fact it's usually even rougher, but I spent a few more minutes on it just to make it more readable. The point of these sketches is to give a client an idea of what they should expect from the image. As you will see later, it doesn't contain any design elements, and nearly everything will move, yet it's obviously the same picture the client approved.



Artist PROFILE

Marek Okon

COUNTRY: Poland



Marek was a web designer until he decided to do some

more serious digital painting. Now he's doing book covers and concept art for video games, and enjoys mixing sci-fi and fantasy into his work.

<http://ifxm.ag/marek-o>



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PRO SECRETS

Testing ideas on the fly

Often instead of sketching on the side, I sketch on the fly by just adding a new layer and painting test elements onto it. I do two or three variations and just flip through them, right on the canvas. This way I can see how a new design will coexist with all of the previously painted elements.

3 Taking stock

For me, this is stage one of painting a new image. At this point I see which elements are looking good and which need to be fixed in order to make the image more appealing. For this particular sketch my main issue is with the jet bike. It should be shown from a more interesting angle. Right now it's looking merely isometric instead of full 3D. Also, the robot looks too heavy for something that should be able to fly. Those wings attached to its back wouldn't help much.



4 Roughing out colour

The second stage of working with a sketch is playing with colour. I start by painting clouds that fill the whole canvas. I'm avoiding the easy route of painting just white clouds, and by combining warm and cool tones I create a sense of depth that will come in handy later on. I increase that depth even more by adding a couple of dark clouds in the foreground, hinting that they are in the shadow of even bigger clouds.

Vehicles Starting from scratch

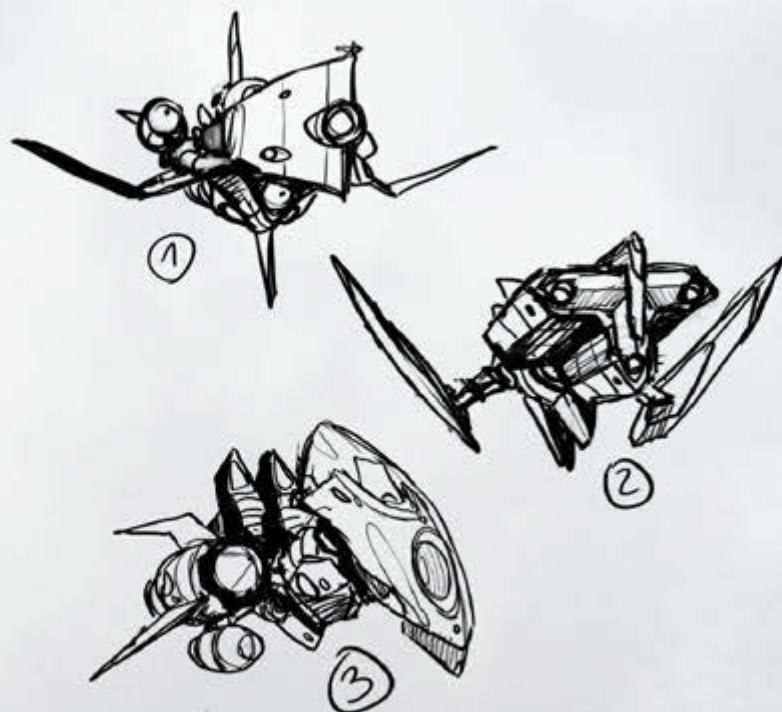


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5 Refining shapes

At this point I do a couple of fast sketches of the jet bike. I want to make it slightly similar in style to old American cars – nothing too futuristic and high tech. I pick sketch number one as it looks nice and sleek, with a big front, pretty standard wings and a fighter-like windshield. My issue with sketch number two is that it looks too heavy, more like a tractor. Sketch number three, on the other hand, is too futuristic and wouldn't fit the style of the image.



PRO SECRETS

Unifying colour

To unify colours on the image I use plenty of colour correction layers with different blending modes. You can create a clipping mask out of them if you want to adjust elements on a particular layer.

6 Using light to help

I paint the jet bike with a few modifications to the concept sketch. By tilting it a bit and painting it from a low angle I create a sense of movement and gliding through the air. Also I paint the nose of the jet bike in shadow while casting strong directional sunlight on its back. This will be helpful to cut out the jet bike's shape from the robot just behind him. Always try to set up the light so it works to your advantage in terms of creating volume and isolating planes.



7 Adding in the robot

Now with a few broad brush strokes I paint the initial shape of a robot – no details yet though. There will be time for that later. I do however create basic volumes by applying correct shading. This shows if the light I choose for this setting does its job. I also apply some texture on Overlay mode, not to create surface details but to add more colour variations to the metallic body.

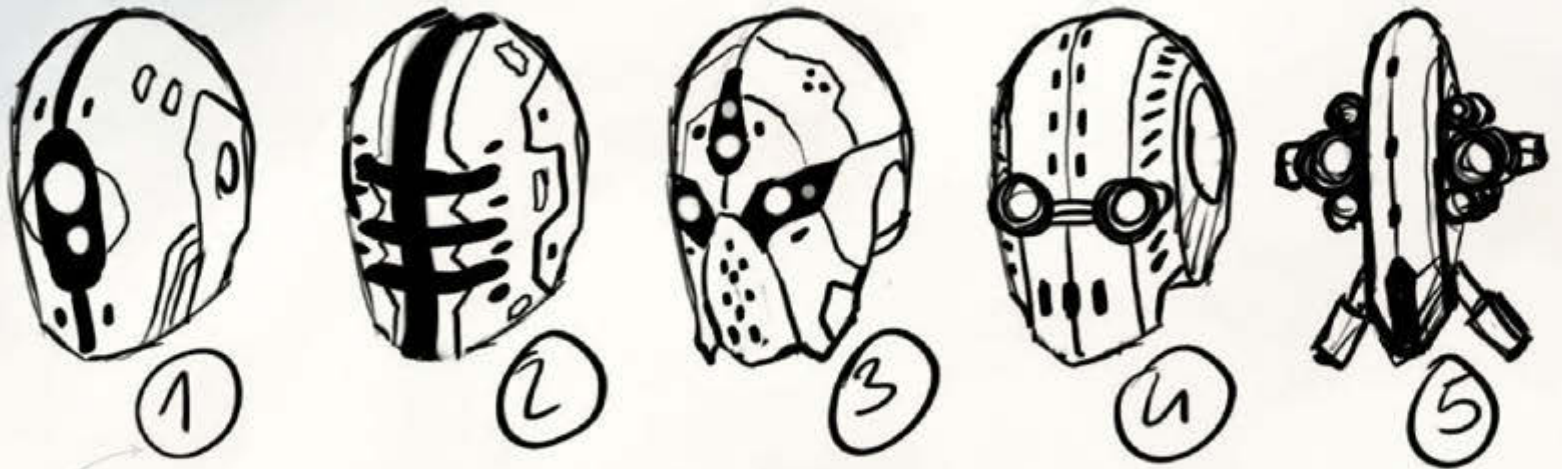
8 Flattening for clarity

At this point I'm quite happy with the results, so I flatten the whole thing and start experimenting with some stronger colour choices and shading solutions. It's not necessary to flatten the image, but when I'm not thinking about layer arrangements my brain can focus more on the image itself. I use a broad variety of texture brushes and mixing modes to create a rich colour palette that can be used later on. These are still the initial stages of the painting, so don't be afraid to really let yourself go. Who knows, maybe you'll come up with something you didn't plan at all, which just works brilliantly with your image. If you're afraid of ruining your previous work, apply the experimental elements on a new layer and then flatten it later.



9 Adding surface detail

I increase the colour saturation on the clouds and make the shading on the robot bolder and more sharp. This way it's in the same directional light source as the back of the jet bike, emphasising the feeling that it's right behind it. This experimental phase often gives you the chance to put in some initial surface detail that you can work on later. Just look at the nose of the jet bike – it gains a grainy metallic surface and some sky dome reflections.



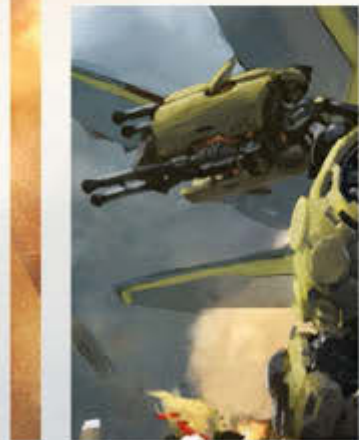
10 Choosing a helmet

At last it's time to figure out the robot's design. As I said before, I want to make it look lighter and a bit more like an insect. So I paint a thinner waistline and make it look like some fragile black machinery is just under its tough green exoskeleton. Also I do some sketches for the head as it will represent the personality of the robot. Head number 5 looks cool, but it's too unusual, and I want to create an image that is somehow familiar to the viewer. We already have a number of strange elements on the image: a flying robot, a jet bike, blimps. Too much of the weird stuff and viewers might get lost. Numbers 3 and 4 on the other hand look too generic and usual – you've seen that stuff hundreds of times. Number 2 seemed cool at the time, but then I saw the design of the main character's helmet in the video game *Dead Space* and it was way too similar. So I went with number 1 – it has an unusual vertical eye alignment that I like, and it looks kind of cold and menacing, like *Hal 9000* from 2001: A Space Odyssey.



11 Adding more elements

Now's the time I add some more design elements – not too detailed though, since they can be changed at any time. I do some more light work, add some blimps in the background, put all the elements on the canvas and then check if everything is coming along together. When you think you've finished it's a good time to check on your composition.



12 Focus points

Look at the bold blue and red lines on the image below. One represents the orientation of the jet bike, and the second represents the robot. You can paint in these lines to represent every major surface and object on the canvas – their intersections are the main focus points of your image. This is a simple and effective way of determining (and placing) just where the viewer's eyes are likely to look.

Our first focus point is of course the jet bike, and it's emphasised even more by adding strong contrast between the dark, cool metal body of the bike and the light warm cloud in the background. In addition, elements like sun glare on the windshield or the red scarf in contrast with the shirt are designed to catch the eyes of the viewer and drag them in the desired direction. Another, less significant focus point is created by the green lines of the wings' geometry. After all, the robot is also an important part of this picture, and I don't want viewers to miss him.

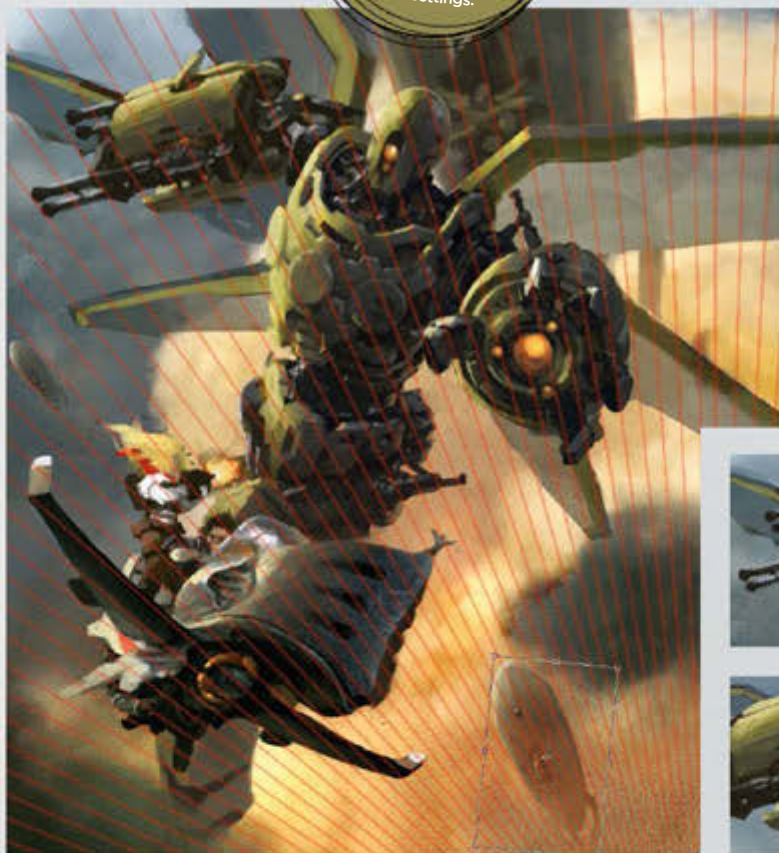
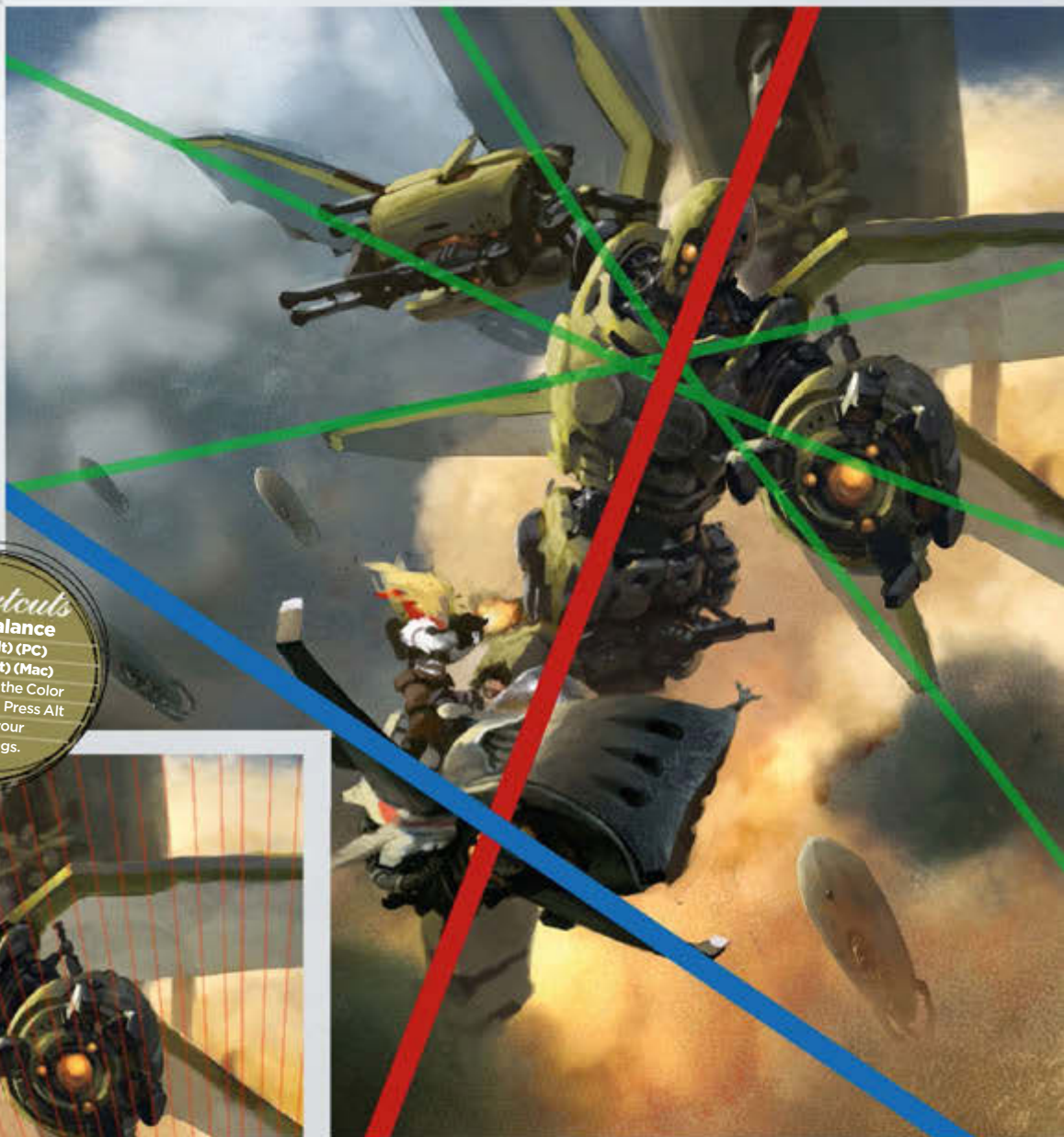
Shortcuts

Color Balance

Ctrl+B (+Alt) (PC)

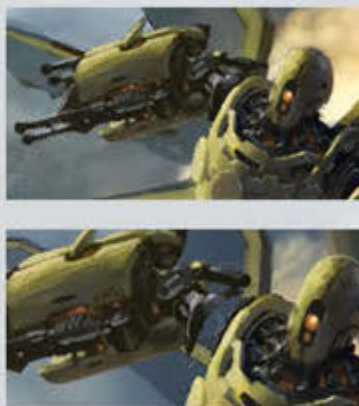
Cmd+B (+Alt) (Mac)

This brings up the Color Balance panel. Press Alt to recall your last settings.



13 End of the beginning

When you are happy with your sketch, it's time to put the important parts of the image onto separate layers. I do some final checks to see if everything is in its place, the perspective is okay and the tones are all right – and after that I start working on some details. If your sketch is done right and fully thought through (don't be afraid to put some more time into the sketching phase, it's the most important phase of all), this should be a fairly easy task. Just be careful not to destroy all your good work.



WORKSHOP BRUSHES

PHOTOSHOP

CUSTOM BRUSH: HEAVY CLOUDS

BRUSH TIP SHAPE

Spacing: 25 per cent

SHAPE DYNAMICS

Size jitter: 45 per cent

Control: Pen pressure

Angle jitter: 100 per cent

Roundness jitter: 18 per cent

Minimum roundness: 28 per cent

SCATTERING

Scatter: Both Axis 64 per cent

Count: 1

Count jitter: 100 per cent

OTHER DYNAMICS

Opacity jitter: 0 per cent

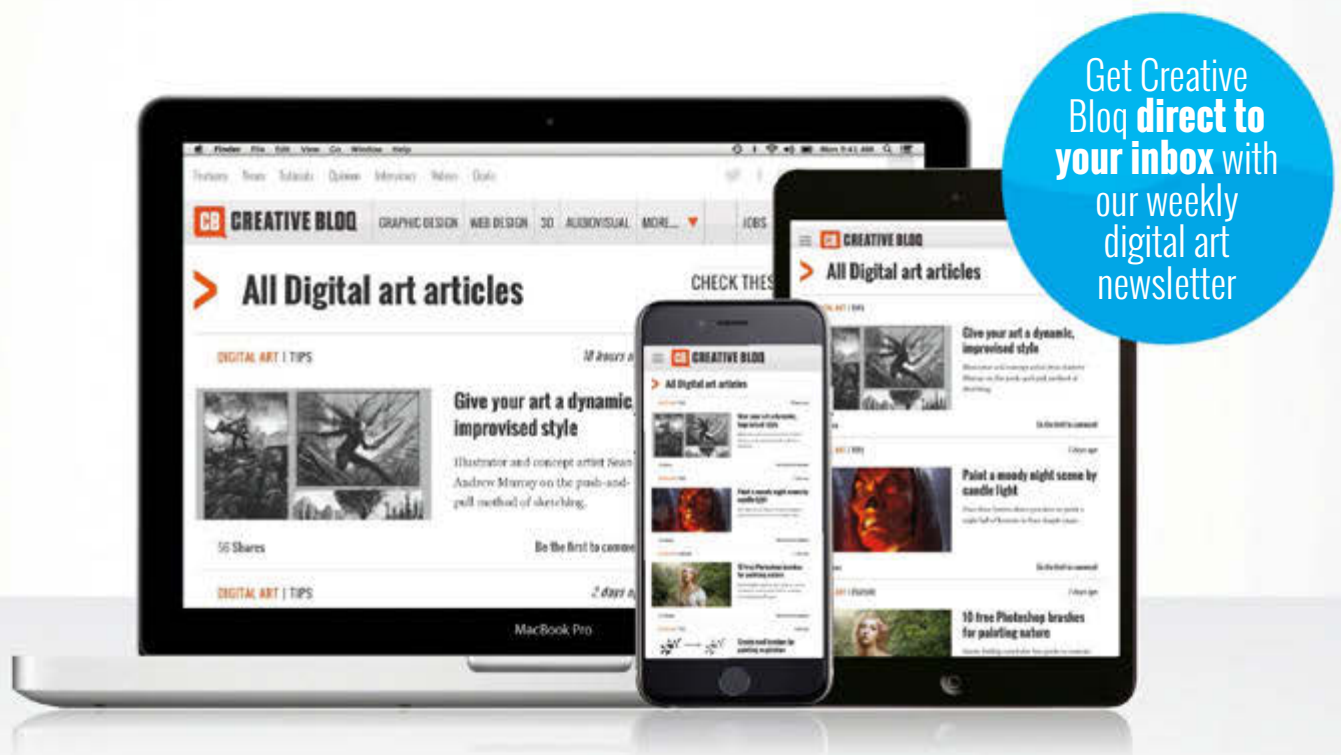
Control: Pen pressure

Flow: Jitter

Control: Pen pressure



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Artist **PROFILE**

**Kemp
Remillard**

COUNTRY: US



Kemp is a
concept artist
with Massive
Black in San
Francisco.

Kemp has designed
vehicles and created
concepts for high-
profile clients including
THQ, Hasbro, Sega,
Nintendo and NCsoft.

www.kempart.com



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Massive Black's **Kemp Remillard** explains how to
take a concept from sketchpad to video game...



Designing vehicles for video games can seem a daunting task, especially to one who's new to the profession.

Depending on the project, the concept artist can encounter design challenges that range from "we don't know what we want – show us something cool" to "we have about 20 requirements that need to be in the concept – and make it look cool". So here, I will go over some of the decisions and methods that I use when designing cool sci-fi vehicles for video games.

The whole process is an odd mixture of research,

planning, experimentation, and finally layout and illustration – all of this, of course, while working with your client to ensure that the concept fits the needs of the game's software engine, story and aesthetic. While there are many methods and approaches concept artists use, designing vehicles can be fun and rewarding with a little research, planning and creativity.

Science-fiction vehicles can take on many forms, depending on the project. For this tutorial, I will focus on that special brand of sci-fi that I love the most – the near future. I'm fascinated by military and space technology, current events, history and socio-political

interactions as a whole. These are interests that I try and infuse into my concepts daily. As a general philosophy, I feel like the more real I can make something fictional, the better the concept and final illustration will be.

For the two vehicles in this workshop I will play the roles of art director and concept artist by creating a brief describing the criteria for the concept to meet, then designing the vehicle around said criteria. Along the way, I'll show how to go through an iterative process using Photoshop and SketchUp to design functional science-fiction vehicles of the not-too-distant future. Hope you enjoy the workshop!

PRO SECRETS

Set up Save Selection

When doing vehicle illustration, set up Save Selection regions in Photoshop for both the inside area of the vehicle and the area outside. That way, you will keep your edges consistent and have a way to make quick masks for painting broadly in both areas.



1 Brief and background

The first order of business when concepting vehicles for games is to review the client brief and understand the background of the world that the vehicle is to exist in. The goal here is to create fictional military vehicles that might exist sometime in the next 20 years or so. With that in mind, I begin by doing research on possible future military projects. In addition, I read up on how stealth technology for aircraft works, and what design concepts go into actual land-roving armoured vehicles. This research and information will be vital to the outcome of the final design.



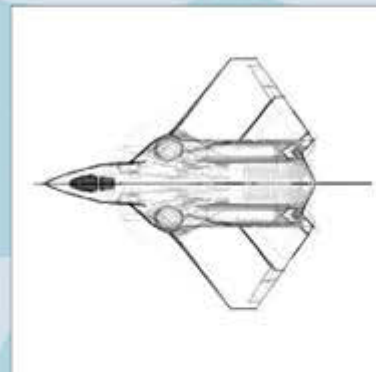
Shortcuts
Copy Merged and Paste
 Cmd/Ctrl+Shift+C,
 then Cmd/Ctrl+V
 Copies all the
 layers that are visible,
 then pastes.

2 Reference

Gathering good reference is also vital to a good design. One great site with tons of images from around the globe is www.militaryphotos.net/forums. If you want to understand vehicles, take time to simply look at them and study their features and subtleties. Then try and understand as best you can what the functions of the various parts are. Shown here are the rough sketches for a proposed VTOL (vertical take off and landing) transport jet with stealth capabilities. Real-life jets like the F-22 and F-35 were referenced, possibly belonging to the same family of aircraft from a single manufacturer. For my project, I decide to be a nerd and name my planes the MV-35 and the MV-36, M for multi-mission and V for its VTOL capabilities. An overarching consideration when designing stealth aircraft is to make sure that none of the angles in the final design are perpendicular to the radar's angle of incidence. In other words, everything has to be swooshed back or diamond-shape to reflect the radar. The tank is more loosely based on modern tanks like the Leopard 2 and Challenger 2.

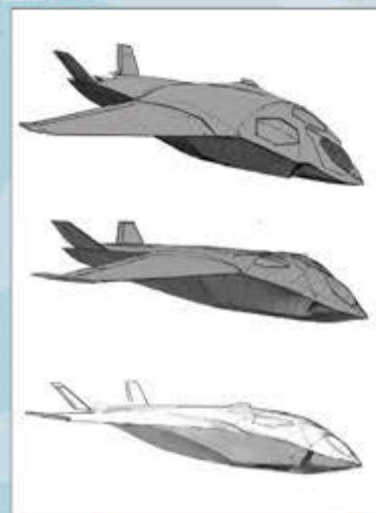
3 Thumbnail sketching

Now I am ready to begin sketching out simple thumbnails of my vehicles using pencil or Photoshop. Depending on the client, this first round can be loose and fast or a little more refined. I prefer to work in a plan view at this stage to get a quick silhouette, but a three-quarter view is also helpful for showing more information. Usually, once an option is selected, I then move on to a block-in model in SketchUp, but more revisions may be necessary later on.



4 Refinement

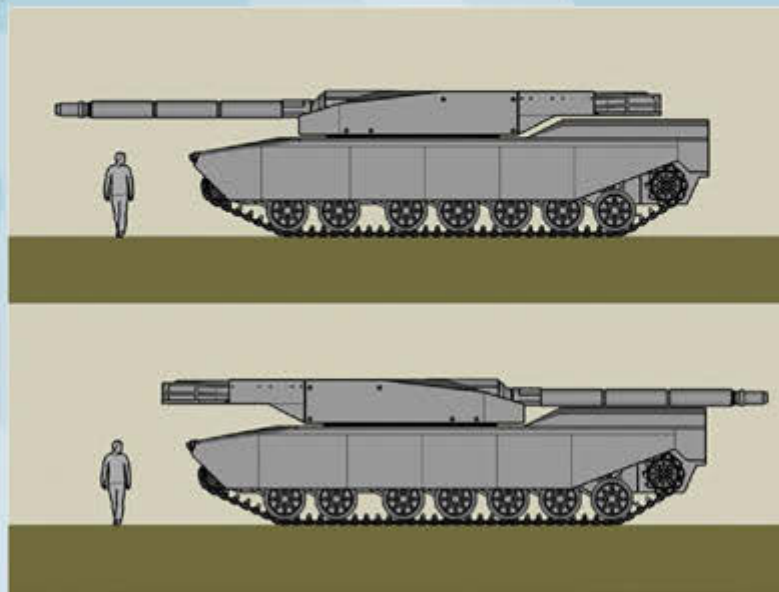
Revisions are a fact of life when working on video games. Often a team of people have input on what a particular asset will be. My initial directions for the VTOL jet proved a bit too impractical in both its look and construction. So after a little more study, it's back to the drawing board, where I arrive on a much more practical design. Still, I am unable to decide between either of the two directions, so I finish them both (hey, I'm the art director, right?), just to have an impression of what each of them could potentially be like when done.

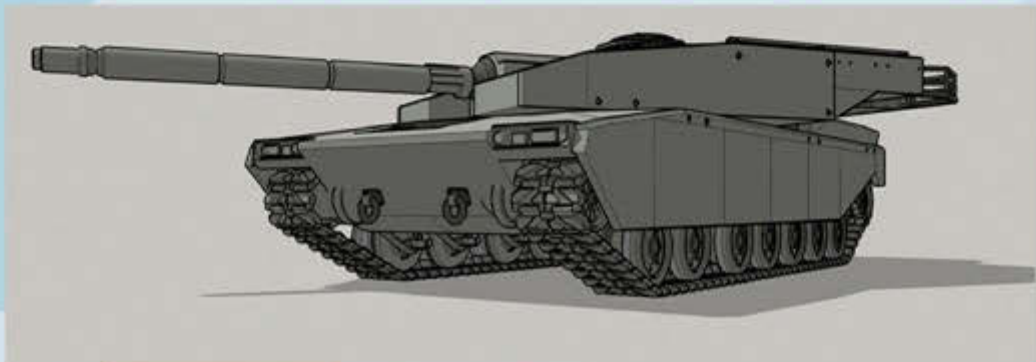
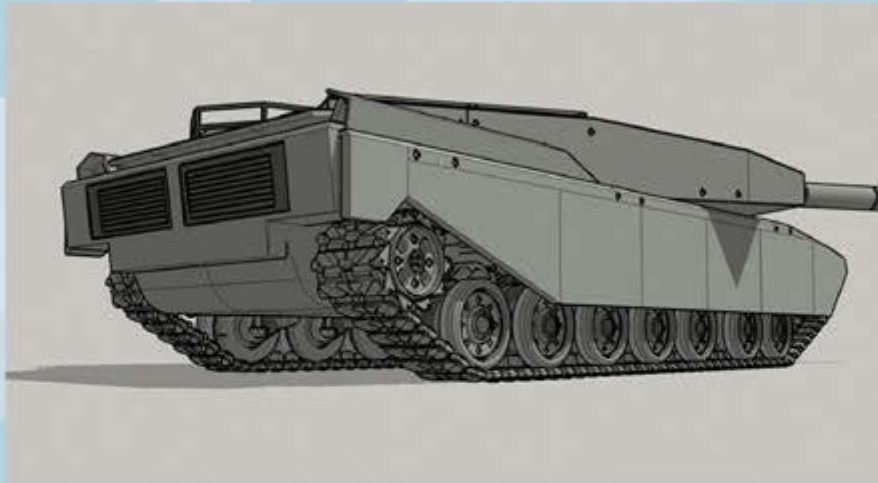


5 Block the models in SketchUp

I find the use of 3D indispensable in creating a product that the client can understand clearly. SketchUp is a great, accessible piece of software that can be used for creating simple or detailed models of your vehicles. Once you

become acquainted with the program and start modelling with it, a library of components to add quick detail and interest can be assembled. Just make sure to change the component shapes so that you deliver something unique.





6 Photographing the model

Another great by-product of designing in 3D is the ability to move around the model and find the best angle from which to present your concept. If time is on my side, I like to make multiple screen shots for collection and review. Finding the best shot can make all the difference in the world.



7 Design for function

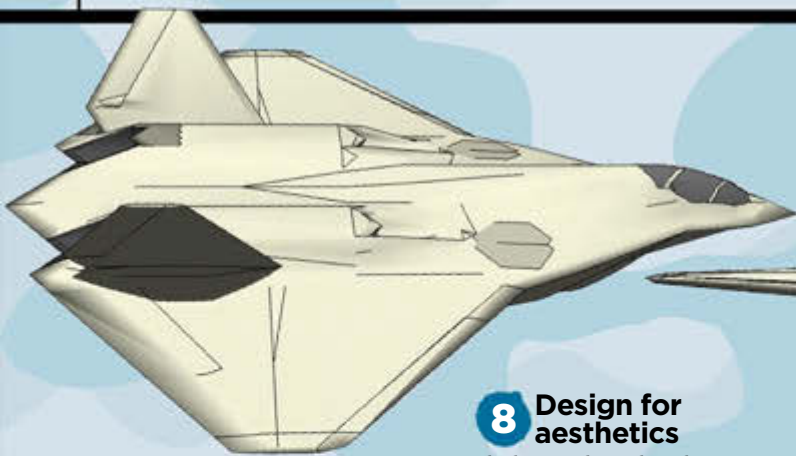
The goal with these concepts is to incorporate real-world characteristics into a fictional design. For the MV-35 and 36 planes, considerations include available cargo space and the placement of forward engines for the VTOL capability. The new F-35 has a special nozzle on its engine exhaust that points down during vertical take off and landing, so I incorporate that into the MV-35's design. Also, cupboard

door-like panels are placed over the VTOL lift fan openings near the cockpit. These doors will open during take-off and landing, then close to preserve the aircraft's aerodynamic shape during flight, like landing gear. One great side effect of the lift-fan door arrangement is the appearance of horns near its head. It never hurts to give your design a subtle anthropomorphic quality to give it some personality.

PRO SECRETS

3D geometry for orthos

With vehicle and tech designs, it is incredibly helpful to have 3D geometry available to set up your ortho. The more detailed the geometry, the less time you have to spend, since each detail is repeated in each view. If you don't have a particular detail in the model, it will need to be added in Photoshop. Bolts and fasteners can be added in Photoshop and Shift-dragged to copy through the design.



8 Design for aesthetics

The bottom line when doing any asset for video games is that it has to look cool – some might say bad-ass – although that description can't always describe everything, right? Either way, it has to look sexy – and that's especially true with vehicles. Although I pay close attention to construction and engineering, I am always trying to push the design into a sleek and interesting shape. Distinctive lines and interesting angles are the order of the day when working as an entertainment artist. Making the asset work and making it look great are what it's all about, because if your design is lacking in either department, it won't make it into the game. Ultimately games, and everything in them, are there to entertain. Taking the time to formulate opinions on what looks cool and what doesn't is as much a part of the job as the process itself.

9 Orthogonal views

This is the stage where the final asset is prepared for delivery to the 3D artists as plans or blueprints. Each studio's requirements for the ortho are a little different, but overall, more is better. The more information you can convey with

your plan view, the better understanding your client will have about what you intended your vehicle to look like. Orthos are sometimes overlooked as an afterthought to the concept process. I prefer to see it as the step where the final blueprints are drawn up before assembly.

WORKSHOP BRUSHES

PHOTOSHOP

CUSTOM BRUSH: CHISLROK BRUSH TIP SHAPE

Diameter: 20px
Roundness: 100 per cent
Spacing: 25 per cent

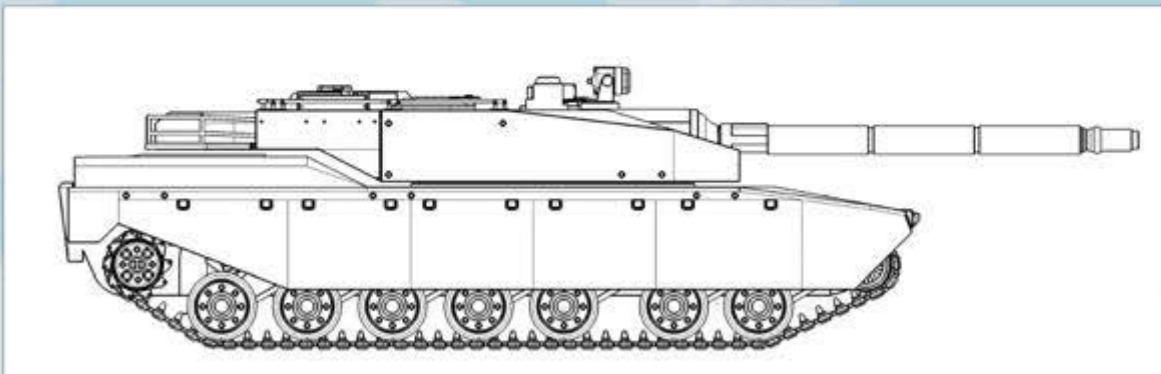
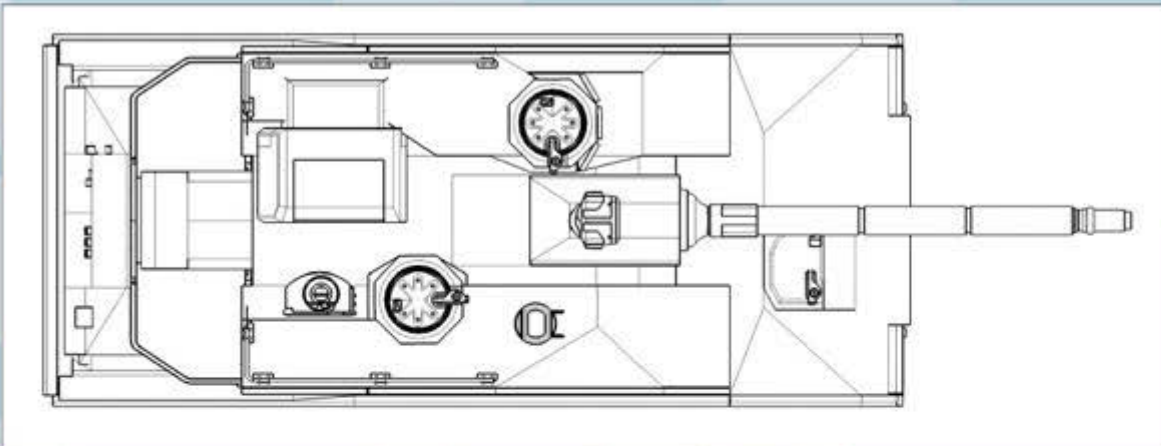
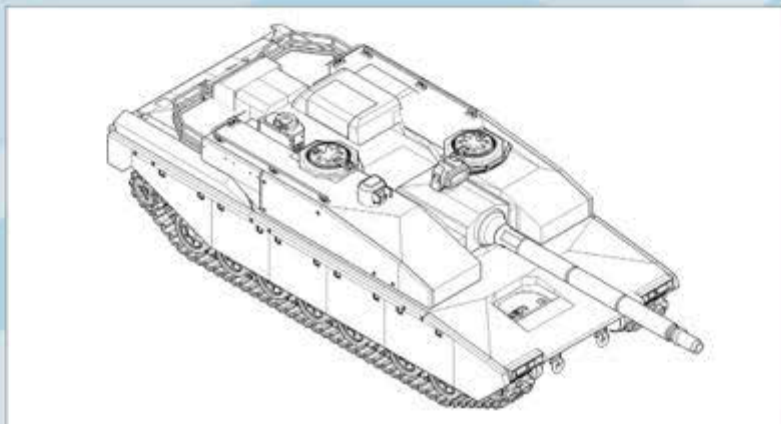
DUAL BRUSH

Mode: Overlay
Brush: Textured Rocks
Diameter: 17px
Spacing: 25 per cent
Scatter: 0 per cent
Count: 1

OTHER DYNAMICS

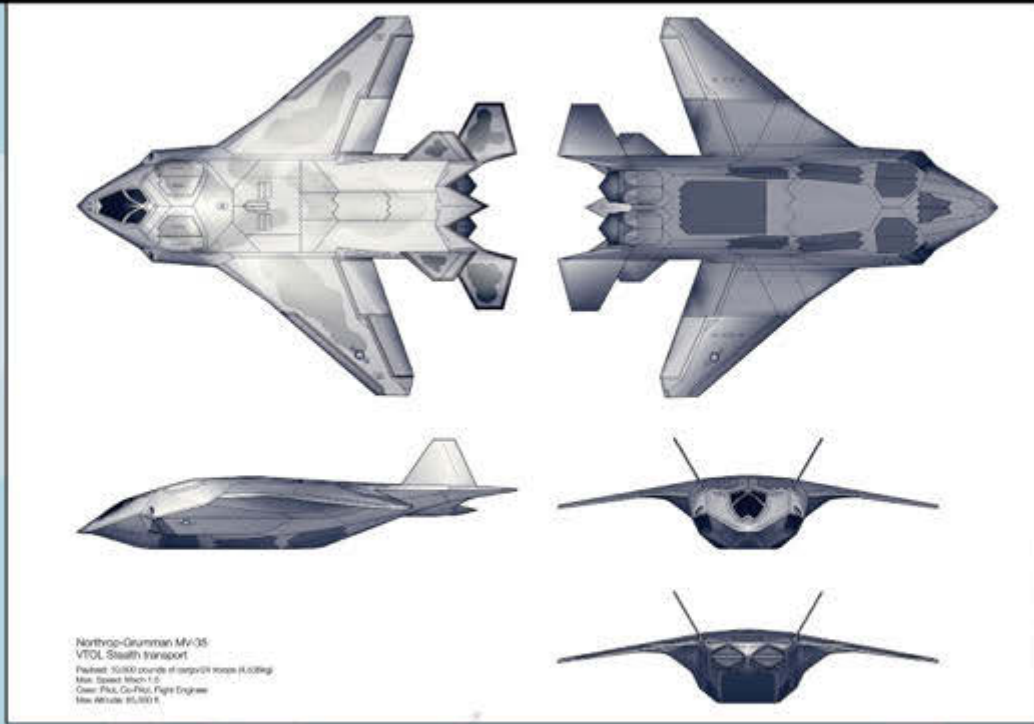
Opacity Jitter: Pen Pressure
Flow Jitter: Off

I like this brush for adding rough and dirty texture to the panels of the tank. Its shape is that of a long rectangle, making it good for texturing surfaces that recede in space.



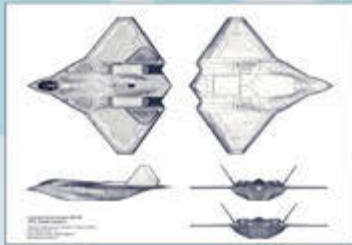
11 Setting up the final illustration

Once the whole concept is approved, I like to prepare an illustration that shows how the vehicle might look in its environment. This is as much for me to sell the concept as it is for the game technicians to get a feel for how it could be finished out in the game. For the tank, I want a battle-worn background, so I use a few custom brushes to paint in the smoke pillars and obscure the horizon line. Then I use a royalty-free image to block in the ground plane. Photo textures are a great way to add realism to your image. Once the background is in place, I adjust all of the values in both the background and the tank. All of the elements need to have their value ranges harmonised to suggest that they exist in the same space. That means making sure the image is not too dark in the shadow area and not too blown out where it's illuminated. The best part is painting in the dirt and battle damage with custom brushes. Once I have the dirt in place and the values lined up, I usually clean up the edges with normal layers and full-opacity paint. Look for accents and rim lights to accentuate when doing clean-up. In the end, decal graphics and lights are applied. If something's not working, I experiment until it does. You should too.



10 Surfacing and detailing

For the MV-35 and 36 planes, each panel needs to be designed at an angle to properly deflect radar. After studying the reference, I notice that one of the coolest characteristics about stealth jets is the very subtle but complex segmentation of the panels. The divisions I add might not hold up to an engineer's eye, but they're close enough to the real thing to make it look authentic. The panelling, graphics and paint scheme for the MV-35 and 36 are added in Photoshop over a SketchUp render when the ortho is assembled.





Photoshop MAKING FANTASTIC FLYING MACHINES

BAFTA award winning concept designer **Christian Bravery** creates a bug-based assault copter from scratch

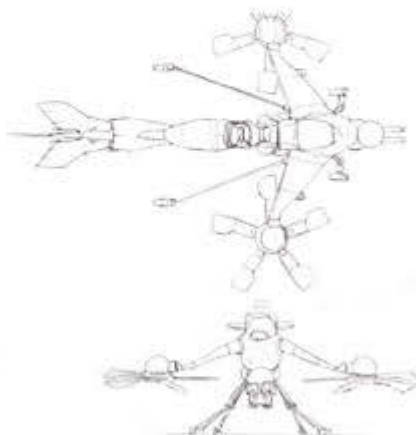
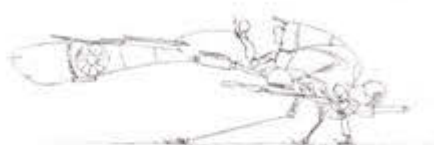
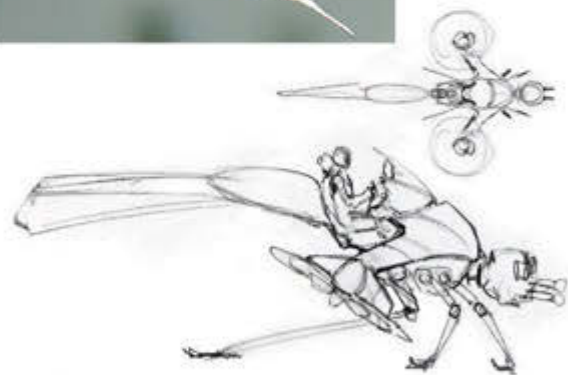
For this workshop I thought that I'd do a piece of speculative industrial design – a futuristic flying machine. That sounds like fun, right? So how do we go about it? We start with the brief. Since I'm writing my own brief, that's easy. I'm fascinated by insect body composition, so I'm going to design a flying machine based on an insect – a wasp or dragonfly perhaps. When I was a kid, I saw a painting of a miniature robot that looked like a housefly by the sci-fi illustrator Tim White. I loved that piece, it really struck a chord. So I'm going to use its concept as a reference for my new creation.

Artist PROFILE
Christian Bravery
COUNTRY: England



Christian runs Leading Light, an art and design agency that provides both character and environment designs for the video game and entertainment industries.
<http://ifxm.ag/ll-design>

**GET YOUR RESOURCES**
See page 226 now!



PRO SECRETS

Making your designs crisp

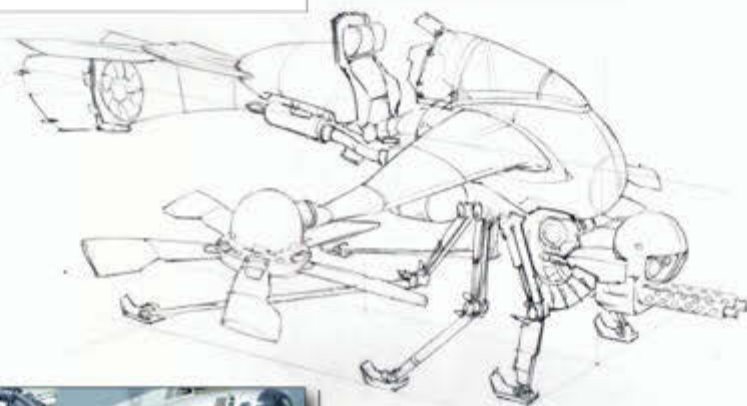
Use the Unsharp Mask filter to give work a nice tight, crisp look. Try to resist using it mid flow, or overdoing the effect, as subtlety is the key.

1 Reference points

To help me paint insects and machinery, I need to find some reference imagery. A quick hunt around my personal library of shots I've collected provides me with some useful images.

2 Thumbnail sketches

Now I draw. Using the images as inspiration, but not simply copying them, I work out some simple thumbnail drawings on paper, based on my dragonfly reference. I want the machine to be small and agile, like a real dragonfly, but large enough to carry a pilot. I mess around with a few options for the pilot



4 Silhouettes

For this kind of painting I like to work dark to light on the subject and retain a plain, pale background. I make a copy of the pencil sketch in Photoshop, and set the Layer Blending mode to Multiply. Next I add a new layer under it, and fill it with dark, desaturated green. Then I paint the pale background in, leaving a dark silhouette of the vehicle.

5 Material thinking

So now for the vehicle itself. What materials should I choose? Well, it's a futuristic flying machine, so I'm going to make it predominantly out of metal – and more specifically polished aluminium. This is mainly because I like that retro feel





at the point which receives the least light from the main light source and the reflected light of the ground plane combined. Make sense? It's pretty simple really. Think about this formula and you're on your way to painting convincing convex bodies.

8 Brushed glass

So that's the basics, but I also need to render glass for the cockpit fore-canopy. No problem. Create a new layer, then using a brush with pressure-sensitive opacity control and a tone slightly darker than the background plane, paint the canopy in a few long quick strokes, then erase to the correct shape. Work in the highlights with some more quick strokes and paint in the metal framework using our nice simple lighting formula.



of old P51 Mustangs and Liberator bombers from WWII, and also because the material has interesting lighting properties that I can explore.

As ever, it's useful to have good reference, and as I'll be reproducing the complex lighting relationships inherent to the subject it's essential here. I choose a few relevant pieces of photo reference from my library, then using these photos as an impromptu palette, I can select appropriate colours from them as I work up the painting. A brief word on photo reference. I don't restrict my search to the subject at hand, but think beyond it to subjects that may be unrelated in the wider world, but whose material properties are similar. For instance, a can of Coke and an F-16 fighter are largely made of the same material, aluminium. Many movie spaceship interiors have that back end of a fridge look. In this case, why not take a photo of the back of your fridge and comp it into your scene? The results may surprise you. Or horrify. There's no guarantees when you throw caution to the wind like that.

6 Simple thinking

Since this image is a design representation I don't need to worry about the complexities of mood, character elements, action or background detailing. I'm just concerned with material, colour and light.

7 Getting the light right

To achieve a good result, I just need to follow some simple rules. This shot is day lit, so a fairly uniform top-down lighting model works best. Surfaces facing up receive the most light, so these will appear brightest for their given local colour (the colour of the material under neutral light). Vertical surfaces will give a medium tone, so it follows that downward facing surfaces should obviously be the darkest. But wait, these areas are receiving bounce light from the ground plane. So the actual darkest area on a given convex surface is



9 Highlights

At this point I'm looking at the painting and thinking that the material specularity is off. It lacks the signature hard-edged shine of polished aluminium. That's easy to fix. I just harden up the lower edge of the highlighted area of the surface and we're there. The basic rule is this – the more reflective the object, the harder the highlight. The less reflective the object, the softer the highlight.



10 Casting shadows

Now I drop in the ground plane shadow, just to make the vehicle feel like it's situated in a real environment, rather than floating in space. This really helps with the solidity of the piece and how it's perceived. I just bosh it in loosely on a new layer and erase the parts I don't like, or that cover the object itself.

Returning to the lighting issue, it's useful to point out that crevices and holes will be the darkest parts of the object and also more saturated for their given local colour. We also need to consider shadows cast across the object.



11 A splash of colour

Okay, that's the base coat done, but it's looking a bit too uniform. All that unbroken, polished aluminium is starting to look bland, so I decide to give it a lick of paint – red paint. To do this without losing existing detail I create a new layer and set its Blending mode to Multiply, then choose a middle red and paint in the colour scheme. I try a few options, erasing those that don't work, adjusting and refining the ones that do, painting in slapdash strokes and using the eraser to tidy up later. Brighter, more saturated highlights are added on another layer in Normal mode.



12 Devil is in the details

Nearly there. Now I add final details like decals, the identification number, warning tags and cockpit controls. Then I work around the whole piece with a homemade texture brush and some nice bright turquoise, adding highlights and rim lighting to soften the whole thing and make it feel less clinical. Play with this technique if you like it. I do.

13 Bringing to the fore

Here and there the bodywork of the machine is getting lost in the background. I make a copy of the collapsed image and make it darker using Curves, then erase back to the original to leave a subtle vignette look to the image.

Finally I give the whole thing a blast with the Unsharp Mask filter to harden it up. Play with the settings and you'll find a look that works for you.

14 The finished article

Okay, there we are, one vehicle, designed and rendered. I hope you like the result, and I hope you learned something along the way.



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"A texture will give your audience something to look at even when nothing interesting is going on"

Saejin Oh (page 212)

Core skills

Whether you want to learn the basics of painting stars, creating monstrous robots or mastering the techniques required to create believable sci-fi environments, our team of artists will reveal their personal tips. Plus Jonny Duddle offers a unique beginners guide to the Wacom tablet.

Featured artists



Frazer Irving



Award-winning UK illustrator Frazer has worked for DC Comics, Pepsi, 2000 AD, Marvel Enterprises

and Hasbro. He's pulled out all the stop to demonstrate how to quickly and effectively paint a starry background for your space or planet scene. Follow Frazer's simple tips and your painting will take on a whole new dimension.
www.frazerirving.com



Saejin Oh



Saejin is a freelance illustrator and comic artist who's best known for his work for Udon. He loves

creating concept art and character designs, specialising in manga. Here he offers up his favourite tips for painting rocks and gives some handy advice for preventing your digital images from looking fake, using his unique manga-fuelled style.
www.saejinoh.blogspot.com



Gary Tonge



Gary has more than 20 years experience as a digital artist, with many high-profile clients, and is the

author of the popular book Bold Visions: The Digital Painting Bible. His advice on painting diffuse light in a cloudy setting is unmissable to anyone planning an atmospheric alien setting or space age cityscape.
www.visionafar.com



Patrick Reilly



Patrick was inspired to become an artist by watching his father draw caricatures, and

discovered fantasy art through the work of Frank Frazetta. His imaginative take on genres has enabled him to put together some unique and easy to follow tips on painting in the popular but tricky steampunk style.
www.preilly.deviantart.com



Philip Straub



Philip is an art director at Warner Brothers Games, and is based in Seattle. His unique style combines

traditional media with two- and three-dimensional digital techniques to create luminescent, detailed paintings. Who better to offer some advice on painting rich and highly believable futuristic cityscapes?
www.artofphilipstraub.com



Fred Gambino



Fred has illustrated book covers for such sci-fi greats such as Issac Asimov, Frank Herbert and Ray

Bradbury. Indeed, his first love is science fiction and he was inspired by Doctor Who and Gerry Anderson to start a career in illustration. See his tips on creating old-school sci-fi robots and be inspired to create your own.
www.fredgambino.co.uk



Marek Okon



Marek is an experienced sci-fi and fantasy artist, although he started out as a web designer. He

has worked as a digital illustrator over eight years and has won numerous awards for his stylish space scenes. Now he turns his hand to tips on painting realistic lava and giving your otherworldly sci-fi scene a sense of realism and dynamism.
<http://ifxm.ag/marek-o>



Jonny Duddle

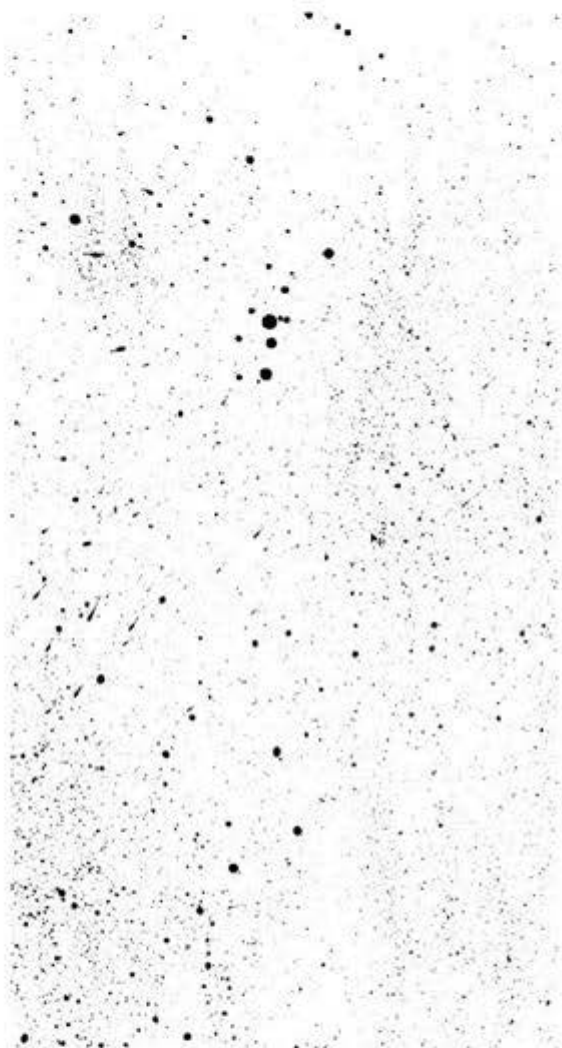


Jonny is a character designer and has worked in the video game industry. He's

also author and illustrator of numerous children's books, and most recently has painted the covers of the latest editions of the Harry Potter novels. Here he lets us in on some unique beginners tips to using a Wacom tablet.
www.jonny-duddle.com

Core skills

Learn basic skills from leading artists and improve your art theory



Set to work on a basic splattering of dots across your sky, perhaps using a toothbrush, then progress your starscape in Photoshop.



This shows further effects, like gradient fills over the stars, for an added bit of celestial flavour.

How to...

Create comic starscapes that don't just look like a load of white dots splattered across the page...

Frazer explains



Starscapes can be done in a variety of ways. My technique is pretty straightforward and uses traditional, standard methods, as well as a little Photoshop magic to create something quite simple yet incredibly effective. To start with, I gather together my trusty star-painting tools: some A4 paper, a toothbrush, some water and some ink.

By applying traces of ink to the toothbrush and dipping it in some water, I can flick and spray colour onto the paper in irregular patterns, to simulate clusters of stars. This may take a few tries because the ink sometimes drips, and clusters may merge together. Looking at pictures of starscapes will give you an idea how they are formed.

Once the art is dry, I scan it into Photoshop and set it up as an RGB file. I then hit Command>I to invert the

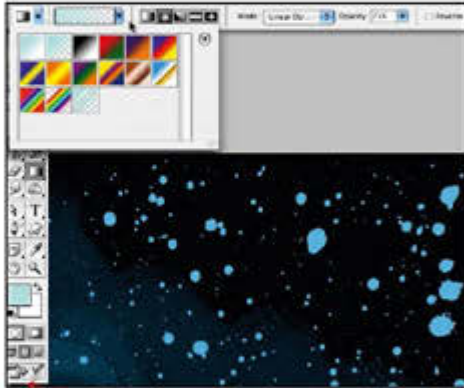
whole image so that the black dots are now white on a black background and I save it somewhere safe.

This piece is now my starscape template. Every time I need a starscape or some element of the night sky I import the image, copy and paste it into the image I'm working on, and then I can edit it to add suitable colours and effects. Don't worry about this not being authentic, as it's exactly what NASA do with the black and white shots

from the Hubble space telescope

To introduce colour, I simply use a Brush tool (ideally a soft brush with Opacity Jitter set to Pen pressure if you're using a stylus to paint with) and I gently paint a white mist over the image to simulate clouds and nebulae. Then I set the brush mode to Colour, select whatever colours I want to be in the image and paint them gently over the top. You can add extra glow effects by following the steps opposite.

Step-by-step: Adding glowing stars...



1 Set the Gradient Fill tool to Linear Dodge, and Opacity to about 70 per cent. Select the Foreground To Transparent option as we only want one small area of colour. This effect can be used with Radial or Diamond Gradient.



2 Choose a star and apply the gradient over the top of it. Use pastel shades to create a bright glow and darker shades for duller glows. Playing around with colours is part of the fun of this.



3 To add to the effect, try applying a second gradient fill of a lighter shade over the top, or even slightly to the side, to emulate clusters of glowing space matter.

How to... Stop your digital paintings from looking too artificial



If done properly, and with the right colours, underpainting will help your artwork come to life.

Saejin explains



I could go into real depth with this subject, but hey, let's save the entire lecture on colour theory for some other time... For now, I'll give you a little tip that'll quickly help you solve this recurring problem: use underpaint.

Fill your canvas with a colour that will represent the mood of your entire piece. Try avoiding bright colours like lime-green, yellow, flouro pink or bright red. Dull brown or greyish blue will often give you the best result. Also, don't

use the brush at 100 per cent Opacity.

Underpainting is there to help you unify colour variations on your piece. However, if you use a randomly selected colour at 100 per cent Opacity it will negate the effect. Remember to use the underpainting to its full benefit – you can even try mixing your colours up on the background before using it to get the best result.

After you've finished painting, you can always repaint the background colour to your taste, but natural colour on the object will be preserved.



Artist's secret

CAN'T SEE WHAT'S WRONG? GO TAKE A BREAK!

People often lay their pencil down after long hours of drawing thinking it's finished. It's easy to stop there – but don't! Take a day or two off and come back to give your drawing another look. You'll be surprised (and a little upset!) to find all the mistakes you've made – and fix them.

Start with flat underpainting (A), then rough out your piece (B) and start filling in colours – faintly enough (C) so the underpaint will show through.

How to... Establish good depth and keep things coherent in your painting

Depth and cohesion have been created by the large wrecked craft, the smaller vehicle tending to it, and the layering of landscape shapes and reflective materials

Gary explains

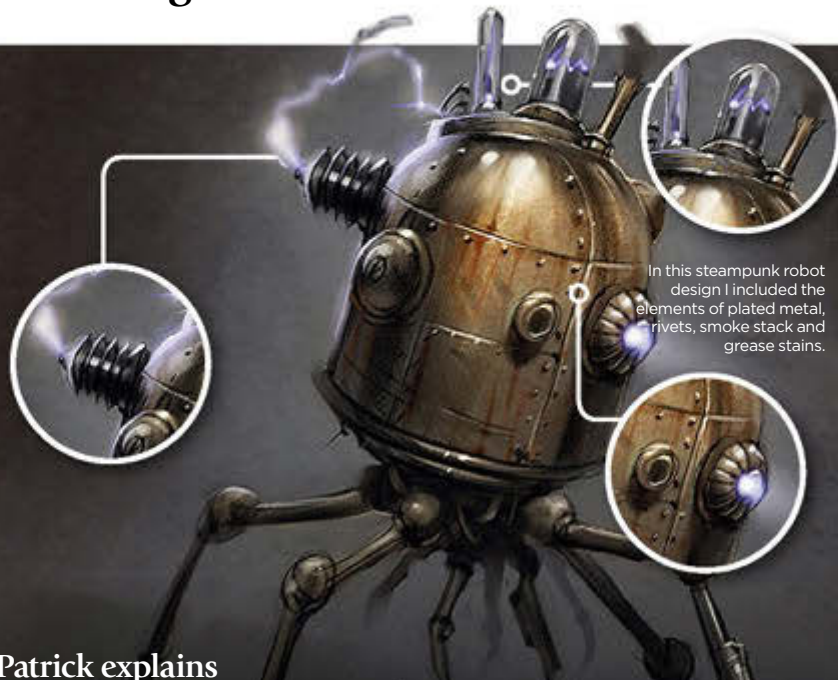


A lot of the success of a speed painting is about being brave enough to commit to strong brush strokes as you build up the image. Keeping the brush stroke count down is one of the cornerstones of an energetic image. There are two distinct ways to achieve this for me. One is to really know what you are trying to paint before you start the image. If you can visualise what you want clearly in your head before you start you will be able to place the major parts of the image with conviction. The second option is to let go completely and sweep brush strokes over the piece, playing with the shapes that form from your brushes – and when something starts to appear, capture that and work the rest of the piece up from there. Working like this can be a little hit and miss, but abstracting your brush strokes in this way can also lead you to something new and different than if you had started a painting in the conventional way. Option two is actually a really good practise system, as by being aggressive with your painting you will become more courageous with your own ability to lay down shapes, colours and strokes.

This image has been built up from aggressive and sweeping brushstrokes in about 45 minutes. The image literally grew from the chaos of the strokes themselves.



How to... Create effective steampunk machinery by following some basic rules



In this steampunk robot design I included the elements of plated metal, rivets, smoke stack and grease stains.

Patrick explains



For the best results in creating steampunk machinery, it's always a good idea to reference period photos of 1800s technology. However, here is a basic rundown of the most popular and widely used elements that give off a steamy look:

- Nearly all steampunk devices employ the use of brown or yellowish metals, including brass, copper or bronze.

- Adding elements of wood, and either red leather or fabrics can also enhance the steampunk vibe.
- Steampunk machinery also has a specific way of being built. Usually it is done with sectional metal plates that are held together by many rivets, gears and cogs.
- Add dripping grease stains and smoke stacks spewing out some filthy black smoke for a dirty 1800s feel.

How to... Paint backgrounds with a stony, rocky texture for your sci-fi scenes

Answer Saejin explains



Natural stone textures come in handy if you know how to paint them. There are many applications for these – one of them being as a helpful filler for your otherwise barren background. If you know how to pull it off, a stone texture will give your audience something to look at even when you have nothing interesting going on in the background! And painting them is pretty simple.



By adding a rocky background you can create a lot more interest in your painting and stop it from looking barren.

How to... Create a high-tech cityscape concept at speed

Phil explains



There are a couple of ways to cut down the time needed to create any kind of futuristic cityscape. First and foremost you'll need a solid understanding of architecture and a foundation in industrial design. Study the heck out of architecture through the ages from books and the internet. As always, reference and making use of a good visual library is the cornerstone to any successful illustration.

Next, you'll want to quickly compose your scene with basic shapes and values creating interesting positive/negative shapes, while looking for an interesting lighting solution. Once you've established the direction you want the image to go in, things start to get interesting. At this point I usually quickly define my colour composition through a series of overlays on top of my base sketch.

With my colour in place, I begin creating visual noise. I've

developed a few shortcuts to create the look of high detail quickly. The first approach is to create a bunch of custom brushes that are appropriate for the image. In the case of this painting, I used bits and pieces of different photos to start from and manipulated them using a variety of Photoshop's brush options. In most situations, the initial use of my newly created custom brushes is to suggest lots of detail. The next approach will further solidify the foundation that the custom brushes have applied to the image.

To accentuate the industrial, high-tech look, I reference such things as chemical plants. I lasso the little pieces I feel have promise and cut and paste them into the image, carefully utilising the skew, distort, and scale tools. Some of the pieces I initially place in the image won't work, but I'm further defining the consistency of design I'm looking for.

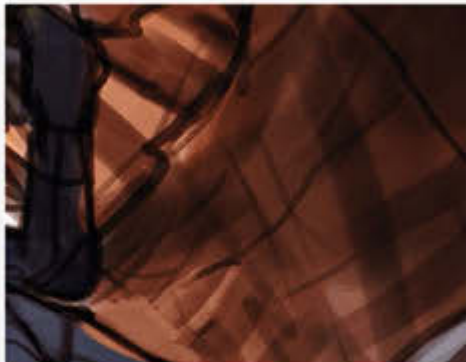


All of the crazy detail seen here is built on a solid value and colour foundation. I use a combination of custom brushes and carefully selected and edited photo reference.

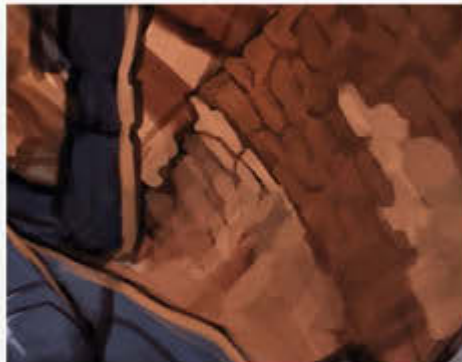


The result of applying the techniques discussed. Creating this type of imagery is a balance of solid fundamental illustration skills and the application of reference and architectural knowledge.

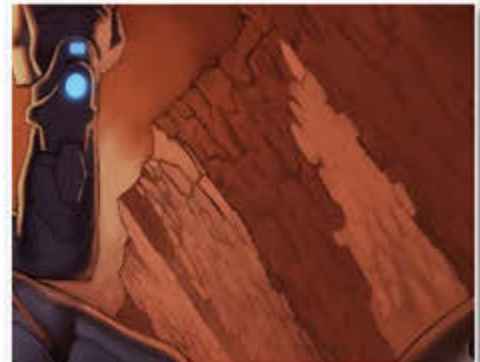
Step-by-step: Painting a rocky background



1 Choose a palette range for your rocky surface, preferably one that's slightly darker than what your final colour will be. Select a base colour and roughly indicate the general area where you'll be painting your texture. Your base colour should be slightly darker than the final colour you're aiming for. Paint in the base colour.



2 Next, pick a brighter colour and start drawing interlocking random patches to represent the rock surface. Preferably, these should follow the angle of the surface and be rigid and sharp.



3 In this case, the shapes are more pronounced vertically than horizontally. Make sure you preserve the grooves while painting, so the patterns will be clearer. Don't forget about the perspective. Try painting the distant rocks smaller and more compact compared to the ones that are closer to you.

How to... Create realistic explosions in Photoshop without the use of complex plug-ins

Fred explains



The image on the far right of this page is a texture that I created using a plug-in from Electric

Image called Storm. It creates random cloud shapes that can be further manipulated in the image-editing package of your choice. However you could create this kind of texture in Painter or even source photographic images that might be of use, depending on how you like to work. The trick is to find something as generic as possible that will fit many situations. I like these textures as they have a painterly quality that gives them an extra dimension.

The image on the left is the picture that I want to add the explosion into. This is in fact one of the covers for the Battletech series entitled Falcons Guard. The model was built and textured in LightWave and has been lit with the position of the explosion in mind. I moved to Photoshop to add the texture of the explosion into the image.

I hope you find this quick demonstration below useful; there are an infinite number of ways of applying these techniques.

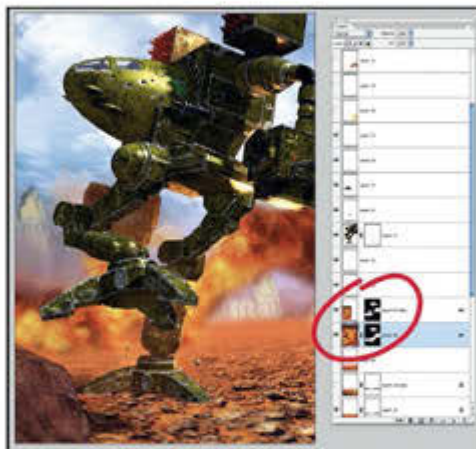


My LightWave model for Falcons Guard, above. And right, the texture that I wanted to use to add the explosion in Photoshop.

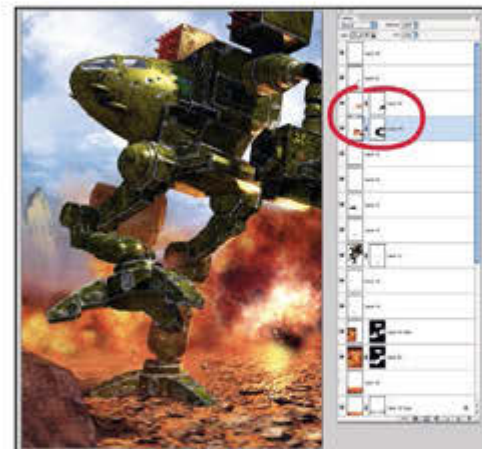
Step-by-step: Creating an explosion in Photoshop



1 The texture has been resized and manipulated in Photoshop using the colour manipulation tools and also the Clone tool. The texture here is supposed to represent the background smoke to the main explosion, so I had that in mind as I worked on this piece.



2 I've added a Layer Mask to both textures and painted the textures out to conform to how I imagine the background smoke should be. It's possible to bring back some of the texture if you want, and you can move the texture around within the area of the mask if the chain icon's off.



3 I place the main explosion texture and add another Layer Mask and paint out those areas I don't feel I need. I've also added the same texture above and used Radial Blur set to zoom. I use the Gradient tool set to Colour Dodge on the ground to imply light from the explosion.



Expansive scenes such as this have a wide scope to achieve great atmosphere and powerful diffuse lighting if tackled correctly.

How to... Use diffuse light for an image with a cloudy setting for impressive results

Gary explains



The easiest way to grasp diffuse lighting is to firstly understand what light actually is. Put simply, a beam of visible energy that extends from its source in a straight line. When light strikes an object any of the reflected light that is channelled towards you is what your eye actually sees. Diffusion of light is an extension of this.

For an image that has atmosphere, imagine that there are countless very small particles in the air, and each one of them is reflecting or refracting the incoming light beams and scattering them in all sorts of different directions. The end result is a completely new light source generated by the diffusion of the original light beam.

If you look at the image below you can see that the major light source is an early sunrise (green lines). However, the more prevalent lighting in the scene is actually the diffused one from the atmosphere of the planet and mist. Here the sun's rays scatter when striking the atmospheric particles and create the look of there being a gentle light from above – the light beams are actually scattered 360 degrees but the only objects in the scene are below the light source, so the effect is demonstrated as the red lines cascading down on to the landscape.



Understanding how light can be reflected by solid objects and diverted and scattered through water particles and so on is the key here. Using lines to understand where the light is going can be useful, as I've shown here.

How to... Quickly and easily create realistic looking lava



I painted the lava with a limited colour palette, working from light orange to dark brown.

Marek explains



While creating lava (or any environment with a dominant colour) it's important to keep a narrow colour palette. Everything in your painting should be in different shades of your dominant colour. Here I'm working from light orange to dark brown to illustrate the lava.

I start with the background plane where I define some depth by creating lighter and darker spots. Some parts are more saturated, some have a different hue. This helps keep the background natural. After that, I create basic shapes for my geological formations. The rule is simple: the closer the object is to us, the darker it gets. I'm

shading more detailed objects, and adding a secondary light source to illuminate the foreground. Keep in mind that it shouldn't be too different from your dominant colour – otherwise it's going to look a bit artificial. To keep shapes clean and sharp, use hard brushes and the Lasso tool to sculpt the environment.

Next I add some streams of lava swirling around. Don't forget that lava is a light source, so it will cast some afterglow on objects nearby. Finally I add some smoke and steam effects for atmosphere. Remember that due to their internal light scattering, fog, steam and smoke usually take the colour of the nearest light source.



Three steps to painting lava. First, define the light and dark areas of the background (A). Next, create some basic geological shapes of the cave (B) and finally add some streams of lava, swirling around the cave (C).

Artist's secret

USING OUTER GLOW

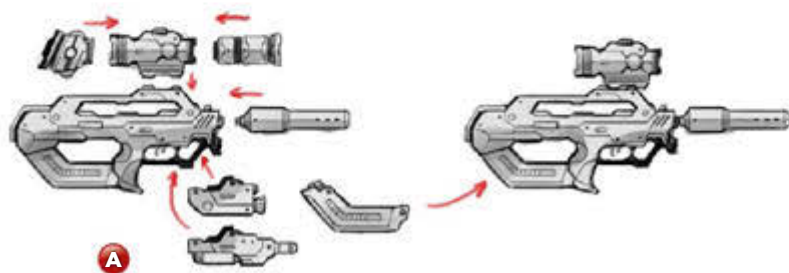
A fast way to show off glowing objects is simply to assign Outer Glow effect to a layer (in this case the lava streams layer). I use bright yellow/orange to paint the lava, and set up the glow effect with a reddish colour.

How to... Create distinctly different guns

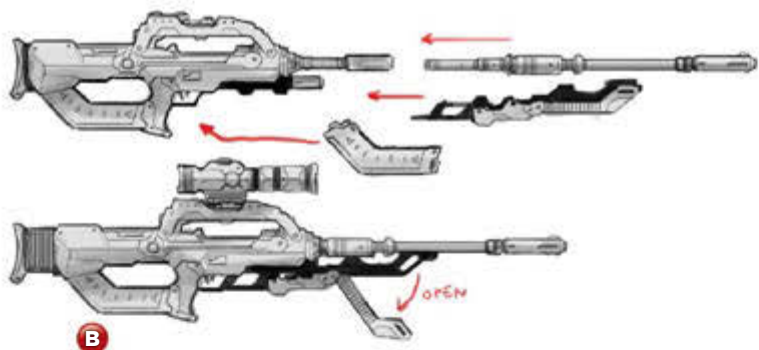
Marek explains



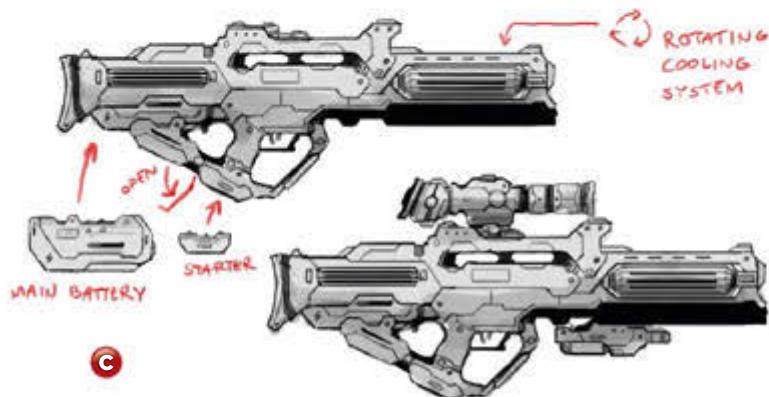
As with most designs, what should influence your work the most are the constraints you are working under. While designing a weapon for military use, the crucial elements of your design should be usefulness, combat performance and ease of use. On the other hand, if you're designing a personal pistol for some high society clientele, you may want to make it sleeker and more elegant. For this tutorial I have decided to create three not-so-futuristic military weapons: a short-range automatic pistol, a rifle and a laser blaster. To make it a bit harder, I decide to design those guns to look as though that all came from same manufacturer, so that they share some generic similarities, and yet stay distinct and different from each other.



Start by gathering references and learning a bit about guns. Some of the elements, including the barrel, lock, magazine and trigger are universal between weapons, and must be taken into consideration when designing one.



For the first two weapons I use a bullpup configuration, with caseless bullets and compact J-shaped magazines mounted to the handgrip and butt stock. For the beam weapon I go for something more elaborate. I feel it will be one of the first laser blasters in use and would have problems with power consumption and heat generation. So we have a double heating system, passive in the back and rotating in front. We also have double batteries as magazines, the smaller one used as an enabler of chemical reactions in the bigger one. Bear in mind that even though this weapon is so different to previous ones, it still has its manufacturer's characteristic frame constructions.



How to... Paint lens flare and advice on adding colour cast effects

Marek explains



A lens flare effect can be a powerful visual tool when used correctly. Just check out the new Star Trek movie – the screen is practically filled with colour cast and lens flare, up to the point where light effects become a kind of visual shorthand.

Lens flare is a fairly common special effect that occurs when the camera is looking directly at a light source. In real life, the lens flare shape depends on the actual camera lens, so don't mix



A well placed lens flare effect, combined with a colour cast, invests the image with a special cinematic atmosphere.

different flare shapes in a single image. Also, lens flare can be an easy way to bring some colour diversity to your image. For example, if it's made up of mostly red and yellow tones, try adding a brilliant blue/green flare, as this is characteristic of artificial light.

While creating your own custom lens flare, keep these rules in mind:

- Use at least two primary glow radial gradients of slightly different colour and size. That also goes for the rays emitting from your light source.
- Experiment with different Blending Modes for each of the elements in your flare set. The usual set-up I use consists of a few Hard Light, Overlay and Pin Light layers.
- Keep your layers organised by kind and stored in a layer folder. This way you can move and reorganise your flares efficiently.

Colour cast effects are similar to lens flare effects. They usually appear on the opposite side to the brightest area in your composition, colouring your darker tones with a slight glow. Create them by using subtle gradients in Pin Light or Lighten mode.

How to... Design a character with a mix of medieval and sci-fi influences

Patrick explains



The best way is to look at reference material from these two genres and find some visual connection between the two so that they can be fused fluidly together. I picked up a few ideas online that I thought would blend in nicely.

Armour, which was commonly used in medieval times, looks very similar to elements found in sci-fi (a robot's metal skin, for instance). So I decide to fuse these two elements and create a cyborg knight.

Adding a bit of technology in the character will push the sci-fi element, so I give my character some glowing electric eyes. Banners and fabrics also add an old-time feel, so I decide to balance out the more mechanical elements of the character with a flowing red garb.



The upper half has a head which resembles a knight, but has futuristic features. The lower half incorporates the human, cyborg half of the character.

How to... Give an object a massive sense of scale while maintaining perspective

Patrick explains



Giving an object a colossal sense of scale in an illustration can be extremely tricky at first, but once you have learned some rather basic rules it can actually become a very simple process indeed.

You should start off by establishing the right point of view. In order to make the objects in the illustration seem gigantic, I usually opt for a low angle point of view, or a worm's eye view, if you will. The viewer becomes the worm and is dwarfed by the objects in the image.

To establish this worm's eye view I usually set up a two-point perspective: a vanishing point off the upper part of the page and one on the horizon line. After I have my perspective and low angle point of view I then move on to values.

Since my giant object is a robot, which is positioned in the middle ground of the image, I want to give the sense that it is somewhat far away from the objects in the foreground. I establish this by lowering the values of the robot in comparison to the objects in the foreground.

After the values are taken care of, I move on to damage debris. I want to give the effect that the footsteps of the robot are destroying objects on the street, so I add debris and dust near his feet.

Here's an example of a massive robot creating havoc in the city streets. The image was done by using the steps listed to the left.



Step-by-step: How to achieve a colossal sense of scale



1 I create my building with a two-point perspective to give the illusion of a worm's eye view. I lay down some simple perspective lines, and use these as guidelines for the buildings which will be enveloping the viewer. The end result is

buildings that appear to warp as they appear further away.



2 Values are one of the first elements that you need to establish in your painting. I block in with a large brush and define the foreground, middle ground and background with different degrees of darks and lights. By using this

technique you should gain a realistic sense of depth in your image.



3 I create my dust and debris by using different kinds of brushes. I'll mix in a very textured brush along with an airbrush. A few strokes with the airbrush help to obscure the values at the base of the robot, and as a result provide the

illusion of smoke and dust surrounding the robot's massive metallic legs.



Wacom's entry-level Intuos range features a hard-wearing aluminium surface with slick matt black plastic Expression keys. It's also slightly inclined, which provides a more natural drawing position for your hand.

Intuos Manga

COMPLETE PACKAGE We find out if budding manga artists should invest in Wacom's entry-level graphics tablet

MAC
&
PC

Price £90 **Company** Wacom **Web** www.wacom.com

The Wacom Intuos Manga is part of a new, simplified graphics tablet range that replaces the old Bamboo tablet models. As well as a slick new name, Wacom has given the tablet a fresh look, featuring a smart brushed-metal work area and a slick black finish for the express keys. This replaces the slightly cheap plastic of the old Bamboo.

With its minimalist design the Intuos looks great on your desk and is perfect for carrying around when on the go. However, this look and portability

affects the device's usability. The active working area is just 152x95mm and is subtly marked out with grey spots, which can be difficult to see in certain lights. You're often left to rely on instinct and guesswork for the edge of your canvas. The same is true of the four Express Keys, which are tucked away in the black area at the top and are only noticeable by a slightly elevated button. Although they have a satisfying click when used, Wacom's desire to make its tablets ambidextrous means you only really use two.

The brushed metal surface gives the Intuos an industrial feel, with the stylus



The stylus feels good to hold, and using the rubber end activates the Erase tool in Manga Studio Debut 4.

making firm contact with the surface. The downside is that this can come across as quite 'scratchy' compared to the plastic of the Bamboo and doesn't always feel like a natural drawing surface. The Wacom stylus that's included in this pack features the same levels of pressure sensitivity and tilt control as before, but is thinner and sleeker, which in turn makes it easier to draw with. Better still, it's also less bulbous and feels more like a traditional pen.



Stanley Lau's distinctive manga art adorns the packaging of Wacom's latest tablet.

Should you want to work wirelessly, you'll have to shell out £35 for the required hardware.

“The brushed metal surface gives the Intuos an industrial feel, with the stylus making firm contact with the surface”

This Manga package features the Pen and Touch model, which means it includes multi-touch gesturing, which can be toggled via a switch on the top. It comes with a full version of Manga Studio Debut 4, but will also work with other painting programs. Using Manga Studio's customisable brushes and pen tools with the Intuos proves a rewarding experience. The brushes themselves are responsive – especially with features such as the stylus's eraser on the end that selects the Erase tool.

With its relatively small surface area for working on, the Wacom Intuos does give you limited scope for your painting sessions: there's not much room for wide, sweeping gestures, for example. However, at just £89 it's certainly competitively priced for the consumer market. If you're looking to use this as anything more than a hobbyist tablet though, it's worth spending the extra money on something that sits further up the Wacom product line. ●

DETAILS

Features

- Brushed aluminum design
- New angle profile
- 1,024 levels of pressure sensitivity
- Manga Studio Debut 4 included
- Suitable for both right- and left-handers
- Supports multi-touch gesturing
- Four customisable Express Keys
- Weight: 310g
- Wireless kit available

System Requirements

PC: Windows 8, 7 SP1 or Vista SP2, USB port, internet connection
Mac: OS X 10.6.8 or later, Intel CPU, USB port, internet connection

Rating



ARTIST INTERVIEW

PJ HOLDEN

The comic artist on using a Wacom tablet with Manga Studio

How does drawing with a Wacom tablet help you get more out of Manga Studio?

I think that digital drawing benefits enormously from some sort of graphics tablet. Using a mouse is possible – comic and pin-up artist Adam Hughes coloured with a mouse for years, for example – but from a drawing point of view, a pen input is the optimal choice. Personally speaking, the pressure sensitivity, together with how customisable Manga Studio's pens are, help to create naturalistic drawing tools.

What brushes and tools are particularly amplified by being able to use Wacom's feature set?

Generally, all of the inking tools are helped by the basic Wacom features. Turning to specifics, Manga Studio's ability to read the tilt of the pen means that you can then use this to simulate the use of a pencil on its side. For example, holding the pen at an angle to get a larger coverage, and then using the pressure sensitivity to achieve darker marks.

Can you give us a top tip on how to configure Manga Studio, so that you get the most out of using a tablet?

I would say that you should configure the primary button as the space bar. This enables you to easily move the drawing surface around by using the pen. And configure the second button as Undo, so when you make a mistake it's as easy to correct as it is to do... not that I make many mistakes, of course!

Finally, are there any tools or brushes in Manga Studio that you wished worked better with your Wacom tablet?

I'd love it if I could get a spray effect that would give a spray cone area depending on the angle and positioning of the pen. I'm convinced it's possible, I just haven't figured out how!



PJ has been a professional comic artist for over a decade, and drawn Judge Dredd, Rogue Trooper and more.

www.pauljholden.com

The Bamboo comes in four vibrant colours, all of which provide fine distraction for when the Pad doesn't work how you want it to.



Bamboo Pad

OH SO SENSITIVE Wacom's latest tablet is more a glorified trackpad, complete with gesture support

Price £40 **Company** Wacom **Web** www.wacom.com

What do you get when you cross a graphics tablet with a trackpad? Probably something like the Bamboo Pad. It attempts to combine the best of both worlds by providing a small tablet area with a pressure-sensitive stylus and support for multi-touch gestures, as used in Mac OS and now also Windows 7 and 8.

It's available in four different colours, and is entirely wireless, running off standard AAA batteries. The dinky pad connects to your computer via a microscopic wireless connector, which

you plug into a USB port. This uses a proprietary system so there's no faffing around with Bluetooth pairing – just turn on the Pad and it's ready to go.

If using the Pad on the Mac, you need to download and install a driver – a minor inconvenience that does, however, ensure that all the Pad's features work with apps that support it. On a Windows PC, the Pad is installed

touchpad with basic stylus support for doodling and writing, rather than a fully fledged tablet. Viewed as such, it works perfectly well. You can sketch quite happily, if not overly comfortably, on its small surface, once you get used to the way the square area maps to the rectangle of your screen. Regardless of the software being used, the Pad is also good at differentiating between

“We found gesture recognition on the Pad to be hit-and-miss, often zooming in or out when we wanted to scroll”

as a standard USB input device. As a result, you can only use its pressure sensitivity in the few native Windows Ink applications available, such as Microsoft Office and Wacom's basic Bamboo Page app. Photoshop and Painter won't recognise the Pad's pressure sensitivity at all in Windows. It's something of a glaring omission for users of the Microsoft OS and one that Wacom doesn't make at all clear in its promotional material.

Having said that, Wacom is pitching the Pad as a general-purpose

pen input and the palm of your hand resting on its surface.

We found gesture recognition on the Pad to be hit-and-miss, though, often zooming in or out when we wanted to scroll. It's nowhere near as reliable as a Magic Trackpad, but it's considerably cheaper and offers stylus support.

In short, if you don't expect miracles from the Pad then you won't be disappointed. Indeed, it would probably make an ideal secondary tablet, especially for use with a laptop given its portability.



The Bamboo Pad is like a hybrid between a drawing tablet and a trackpad with gesture support.

DETAILS

Features

- Wireless touchpad
- Wireless stylus with one button
- Multi-touch gesture support
- Pressure sensitivity
- Left- and right-handed setup
- Runs on standard batteries

System Requirements

PC: Windows 7 or Windows 8
Mac: OS X 10.7 or later

Rating





Wacom & Photoshop WACOM WIZARDRY



Get more from your Wacom drawing tablet with **Jonny Duddle's** top 20 golden nuggets of advice on setting up and using them...

Artist PROFILE

Jonny Duddle
COUNTRY: England



Jonny has worked as a concept artist in the games

industry for many years. He also writes and illustrates books for children, and has recently painted the covers of the latest Harry Potter editions. He relies on his trusty Wacom tablet for much of his work.

www.jonny-duddle.com

Back in the early 90s, when I trained as an illustrator, computers were slow and expensive and Photoshop didn't have a History palette. Most of my work was drawn with a dip pen and coloured with ink and watercolour washes.

I bought my first Apple Mac in 1998 with a copy of Photoshop 5. I was hooked, instantly. I could experiment with drawings and paintings without wasting a fortune on heavy watercolour paper and inks! I no longer had to lean over the bath, stretching watercolour paper onto big slabs of plywood. What's more, I didn't have to start a picture all over again because my Gillot nib had splurged ink across my carefully rendered line work.

It was a revelation. But I found the mouse cumbersome and restricting. So I looked for an alternative and a friend told me to try a Wacom. I bought a beige A6 Artpad II for £60 and was flabbergasted. I had all the control of a pen, but on my computer. It was so much more intuitive than my mouse and much cleaner than my dip pen and Sable brushes. Tablets have come a long way since 1998, but they still perform the same job. They make the task of creating art on a computer feel more natural. The following tips give some pointers to setting up and using a Wacom. Most of this advice is not specific to any particular model, because I've used most models since the Artpad II. Most application-specific tips apply to Photoshop.

1 HORSES FOR COURSES

Choose the tablet for you – they come in all shapes and sizes. They range in price from about £60 for the basic Intuos, to £2,500 for the Cintiq 24HD Touch. If possible, I'd recommend trying the various sizes before buying. I know a few people who went straight out and bought A4 or bigger Wacoms and then realised they didn't have enough desk space, or that they felt that they were swinging their arm about too much on the larger tablet. My favourite size tablet is A5. But I used my Artpad II for several years and only changed model when my G3 Mac died and I needed a USB connection for my new Windows laptop. I bought an A6 Intuos 2. You don't need to spend a fortune to benefit from a Wacom. ➔

2 DESK SPACE

Arrange your workspace. A poorly arranged workspace can put all sorts of strains on your body and won't help you get work done efficiently. One of the great things about a tablet is that you use a pen instead of your mouse, which is much less likely to lead to problems with your hands and wrist. But it's still important to get set up correctly with a supportive chair and a desk at a height which enables you to keep your forearms horizontal.



3 DRAWING ROOM

Comfort and arm room are important. I like to have room for my drawing arm. There's nothing more irritating than an obstructed drawing arm. Keep the space free around your tablet and give the tablet plenty of desk space for when you want to turn it, so that you can draw at that awkward angle. Allow your forearm space to swing about.

4 KEYBOARD POSITION

Even if you have an Intuos 3 with its touch strips and function keys, you will still need to use your keyboard for shortcuts. Make sure you can reach the keyboard without stretching. The position of your keyboard and Wacom will probably evolve with use, but always keep it comfortable to avoid any risk of repetitive strain injury.

5 SETTING-UP A WACOM

Setting up and installing Wacom software is straightforward, whatever model you own. It's worth reading through the online help and getting familiar with the various settings. Have Photoshop open (or Painter, if preferred) if you make changes to the default Wacom settings, so you can see how the changes affect your brushstrokes.



“Consider changes to the settings that could improve your workflow”



6 MAPPING TO DUAL MONITORS

Dual monitors radically alter the shape of your desktop. By default, a Wacom will map across both monitors, which means a diagonal line you draw on the Wacom will be at a different angle on screen. You can set the mapping to just one monitor, but you'll have to use your mouse on your second monitor. I used to map my A5 Wacom to take in the first portion of my second display so that I could put my Photoshop palettes up against the edge of the screen on my second monitor.

7 CUSTOMISED WACOM SETTINGS

The default settings on a Wacom are pretty intuitive and work well for most people. Set your tip feel to your liking, because people draw differently, whether it's on paper or digitally. And as you familiarise yourself with the Wacom stylus and tablet, consider changes to the settings that could improve your workflow. The Wacom menu can be found in your System Preferences on a Mac or in the Control Panel in Windows.

8 STYLUS BUTTONS

The Wacom stylus has a button along its body. I think these are right-click and left-click by default. For Photoshop I find right-click incredibly useful for picking brushes as I'm painting. I've also experimented with mapping the Eyedropper tool to the other button for picking colours quickly while painting.

9 DOUBLE-CLICK

Set the speed of your double-click in the Wacom menu. It can be infuriating if this is set wrong, especially if you use your Wacom almost exclusively instead of your mouse. Make sure the speed feels fluid and natural.

10 WHAT DO YOU DO?

Before changing all the settings, spend time assessing your workflow and identify the tasks, buttons and shortcuts you use the most. I recently upgraded from an A6 Intuos 2 to a Cintiq 21UX and spent the first few weeks constantly changing what I assigned to my function keys and touch strips.

11 FUNCTION KEYS

The Function keys on an Intuos 3 can be useful for shortcuts and especially for common tasks with awkward multiple key shortcuts. I have my Function keys set up for Free Transform, Hue/Saturation, Levels, Colour Balance and Fill. I use these menu items in Photoshop regularly. Mapping them to the Function keys saves opening drop-down menus.

12 TOUCH STRIPS

These are good fun. But I've disabled the touch strip to the right of my tablet because I found I was constantly triggering it with my arm. I use the other touch strip for brush size. It's a handy way of resizing the brush tip without tapping away at the [and] keys. If I want to be more precise I use the right-click on the Stylus button to set brush size with the slider on the brush pop-up.



13 OPACITY

This is the Wacom's biggest strength. Using pen pressure to control opacity gives complete control to the artist. In Photoshop, opacity is set in Other Dynamics in the Brushes palette, by setting Opacity Jitter Control to Pen Pressure. In Painter, opacity can be set in the General tab in the Brush Creator, by setting the Opacity Expression to Pressure.

14 BRUSH TIP SIZE

Using pressure to control brush size can also give a natural feel to brushes in Photoshop and Painter. This can be useful for inking line work, for instance. Working with tip size set to Pen Pressure and Opacity set to 100 per cent can give a good inked look for comic work.

“A Wacom tablet gives the freedom to draw, scribble and paint in a much more natural way”

15 THE ERASER

The eraser has always eluded me. I know it's there, but never use it. I find that if my hand is hovering over the keyboard (and it usually is, even with Function keys and touch strips), I prefer to use [E] and the more precise end of my stylus to erase. I keep meaning to assign it to something completely different... maybe Save, perhaps?

16 TILT

I've got to be honest and say I haven't used tilt to any great degree. I know that tilt is effective in Painter and I've played around with it a little. What happens is the angle and tilt of the stylus affects the mark made by the brush. This can give a whole new level of real world control. Try it, because it's good fun.

17 NIBS

Wacom provides several nibs with the current generation of tablet. These nibs don't affect the mark made, but affect the way it feels making the mark. Try them out. I stick to the default nibs because lots of spares are supplied. Once your nib starts to look more pointed or has flat edges, consider changing it for a spare, to avoid scratching the tablet's surface.

18 APPLICATION-SPECIFIC SETTINGS

Most of my tips have made more mention of Photoshop than Painter or other applications. I know people who use a Wacom for working in Maya or 3ds max. Whatever package you use, you can have different settings for each by using application-specific settings. This can be very useful if you have different shortcuts in Painter than in Photoshop and want to apply some of these to your function keys, for instance.

19 WACOMS AND LAPTOPS

Although I've upgraded the Wacom tablet I use with my desktop machine, I still use my A6 Intuos 2 with my laptop. A small Wacom and a laptop enable an artist to paint pretty much anywhere. I've managed to draw from observation in bars and cafes with this set up. It's not quite as easy or flexible as a sketchbook and pencil, but almost...

20 FREEDOM

A Wacom tablet gives the freedom to draw, scribble and paint in a much more natural way than a mouse ever could. A computer gives you the freedom to experiment with different paint packages without wasting cash on paper, inks and paint. So there's no excuse not to experiment and have fun!



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50 Francis Tsai

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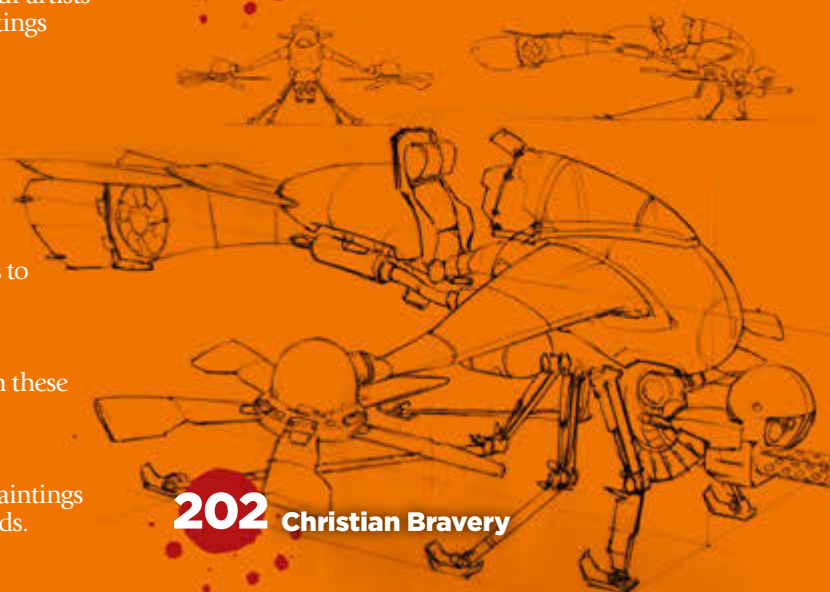
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